# MARYLAND AGRICULTURE IN THE POST-WAR PERIOD

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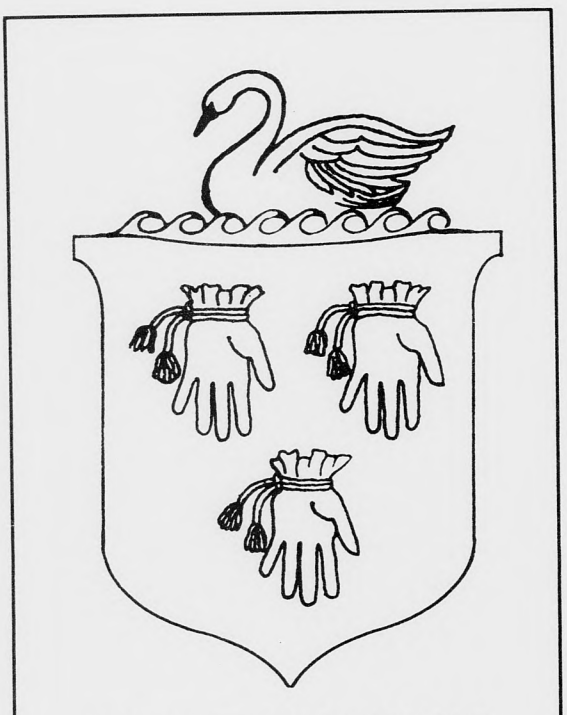

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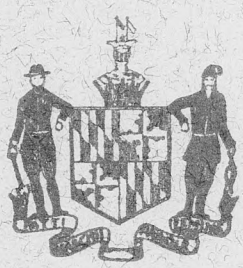

## REPORT OF THE POST-WAR STATE AGRICULTURAL COMMITTEE

UNIVERSITY OF MARYLAND,
EXTENSION SERVICE
College Park, Maryland

OCTOBER, 1944

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# MARYLAND PROGRAM
## FOR
## POST-WAR AGRICULTURE AND RURAL HOMES

Developed by a Post-War State Agricultural Committee appointed by Dr. T. B. Symons, Director of the University of Maryland Extension Service. In addition to specialists of the Extension Service, Experiment Station and other Departments and Divisions of the University, this Committee included leaders of all State Agricultural and Rural Home organizations.

Eighteen Sub-Committees were set up by the State Committee, each of which was composed of persons deemed best fitted to develop proposed programs for their respective phases of Maryland agriculture and rural life.

This program is the result of the combined knowledge, experience, and thinking of the several Sub-Committees, as adopted by the Post-War State Agricultural Committee.

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Cooperative Extension Work in Agriculture and Home Economics,
Extension Service, University of Maryland and United States
Department of Agriculture, Cooperating.
T. B. SYMONS, Director
(Distributed in furtherance of Acts of Congress
of May 8th and June 30th, 1914)

## POST-WAR STATE AGRICULTURAL COMMITTEE

T. B. Symons, Chairman, Dean and Director of Extension, University of Maryland

Paul E. Nystrom, Secretary, State Emergency Farm Labor Supervisor

T. Roy Brookes, Master, Maryland State Grange

Roy C. F. Weagly, President, Maryland Farm Bureau, Inc.

C. E. Wise, Jr., Secretary, Maryland Farm Bureau, Inc.

Edward F. Holter, Secretary, Maryland State Grange

P. C. Turner, President, Interstate Farmers

Mrs. W. Atlee Armour, President, Maryland State Council of Homemakers' Clubs

Mrs. Edwin Fry, President, Associated Women of the Maryland Farm Bureau, Inc.

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Miss Venia M. Kellar, Assistant Director, Extension Service

S. H. DeVault, Head, Department of Agricultural Economics, University of Maryland

H. F. Cotterman, Assistant Dean, College of Agriculture, University of Maryland

*F. B. Bomberger, Coordinator of Marketing, University of Maryland

W. B. Kemp, Acting Director, Maryland Experiment Station

R. W. Shermantine, President, Maryland Milk Producers, Inc.

B. B. Derrick, Maryland and Virginia Milk Producers' Cooperative

George Sachse, Maryland Tobacco Growers' Association

H. Hoffman, Inter-State Milk Producers' Association

Stanley M. Fulton, President, Maryland Horticultural Society

Richard C. Riggs, President, Maryland Stockmen's Association

Harry Rieck, President, Maryland State Poultry Council

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* Deceased.

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FLOYD J. ARNOLD, Dairy Department, University of Maryland
M. A. JULL, Head, Poultry Department, University of Maryland
C. H. MAHONEY, Head, Department of Horticulture, University of Maryland

# MARYLAND AGRICULTURE
## IN THE POST-WAR PERIOD

Those who are interested in Maryland agriculture recognize fully that winning the war is the first consideration. Each year they are establishing new records in producing the materials vital to the war effort. They are aware, however, that readjustments will have to be made in the agriculture of the state and on a large percentage of the individual farms, as well as in the homes, following the end of hostilities.

In order to be prepared for new conditions and problems which may confront the agricultural industry of the state, or any parts of it, and to make such adjustments as may be necessary in the best possible manner, agricultural and rural home leaders took definite steps to survey the situation and make such plans as appeared desirable.

The State Post-War Agricultural Committee held its initial meeting on November 1, 1943. This Committee is composed of representatives of all farm and home organizations in the state, specialists of the University of Maryland, Federal agencies carrying on agricultural programs in Maryland, the State Bankers' Association, and the State Department of Forestry.

As the outcome of discussions at this meeting, it was decided that as many people as possible should participate in formulating the post-war agricultural program. To that end, subcommittees were authorized, each of which would be composed of persons deemed most capable of developing a proposed program dealing with one of the several phases of a broad agricultural and rural life program. It was decided, also, that these proposed programs should be considered and discussed by groups in the counties and local communities before being presented to the State Committee for approval. Dr. T. B. Symons, Dean and Director of the Maryland Extension Service, was elected permanent chairman of the Committee and Paul E. Nystrom was elected secretary.

Sub-committees were created to consider and make recommendations on eighteen phases of the general program. They included Farm Crops; Animal Industry; Dairying; Poultry; Fruits; Vegetables and Canning Crops; Tobacco; Insect and Disease Control; Conservation; Farm Engineering (rehabilitation of farm plant and equipment); Marketing Farm Products; Rural Homes; Rural Youth; Farm Economics (farm labor, and adjustments in management practices); Education (including rehabilitation of war veterans); Farm Organizations; Rural Institutions (roads, taxes, credit, land tenure, etc.); and Federal-State Relations.

Reports of sub-committees were presented to the State Post-War Agricultural Committee on October 20, 1944, and adopted by that Committee as a program for Maryland agriculture and rural life in the post-war period.

Changes will be necessary, no doubt, as actual conditions differ from those foreseen in planning this program. However, the considered judgment of the many leaders who have participated in the planning cannot fail to be of great value.

This report has been compiled and edited by A. H. Snyder, Extension Editor.

## ECONOMIC AND SOCIAL PROBLEMS
### RELATED TO AGRICULTURE AND COUNTRY LIFE

The following outline presents some of the problems on which attention will need to be focused in the postwar period.

**Marketing and Distribution**

- Changes in methods of distribution
- Facilities for assembling farm products
- Improvements in terminal market facilities
- Dehydration and quick freezing of farm products
- Development of cooperation in marketing, assembling, grading, packing, storing, shipping, processing, financing, and merchandizing farm products
- Development of cooperative farm services, such as those relating to electric power, truck transportation, soil conservation, farm credit, etc.
- Foreign and domestic demand
- Development of two-way trade

**Agricultural Prices and Price Policies**

- Support prices
- Ceiling prices
- Administered versus free prices
- A two-price plan for agriculture

**Farm Income**
- Problems of maintaining farm income on a relative level with non-farm income
- Problems of low income farm families
- Manpower needs of agriculture

**Land Tenure and Settlement**
- Land price control
- Public farm land appraisal service
- Agricultural credit
- Establishment of veterans
- Part-time farming
- Corporation farming versus the family type farm
- Social security and liability insurance
- Improvements in mortgage plans (longer terms, repayment privileges, etc.)
- Improvements in leasing agreements
- Securing tenants
- Father-son partnerships

**Conservation of Land and Water Resources**
- Proper use of land
- Erosion control
- Forest conservation
- Irrigation and drainage

**Rural Living and Social Facilities**
- Problems in rural education
- Problems in nutrition, rural health and medical facilities
- Problems in rural roads
- Problems in rural housing
- Problems in maintaining local organizations

**Taxation in Relation to Agriculture**
- A tax policy for agriculture
- Fields of national, state and local taxation
- Income taxes, excise taxes, property taxes, severance taxes, etc.
- Income taxes as applied to farmers' cooperatives

**Adjustments in Agricultural Production**
- How to maintain high levels of employment and income
- Development of local industries
- Development of further uses for agricultural products
- External and internal trade barriers
- Control of surpluses
- Subsidizing agricultural production
- Subsidizing agricultural consumption
- Greater efficiency in production

**Improvement of Farm Plant and Equipment**
Rehabilitation of farm plant and equipment
Use of machinery for various types and sizes of farms
Greater use of labor saving machinery

DR. S. H. DEVAULT,
Head, Department of Agriculture Economics,
University of Maryland.

## FARM ECONOMICS, FARM LABOR, AND ADJUSTMENTS IN MANAGEMENT PRACTICES

Because of the time lag between production and consumption of most agricultural commodities, it appears likely that agricultural commodities consumed during the primary phase of demobilization (a period of approximately 12 to 18 months following the cessation of hostilities in Europe) will be those produced mainly in 1945 and only partly in 1946.

The following is meant to be a probable pattern of Maryland agriculture; it is not necessarily a prediction or forecast.

### FARM ECONOMIC ADJUSTMENTS

In making this appraisal of the adjustments in the production of agricultural products in Maryland during the demobilization period, it was assumed that farmers would not materially alter their present pattern. Major factors limiting production are expected to include: The quantity and quality of labor, insufficient machinery, and scarcity of livestock feed.

The soil, climate, transportation facilities and the proximity to large cities give Maryland farmers a comparative advantage in production of fluid milk, vegetables, and poultry products. These will continue to be the leading agricultural enterprises in the State during the postwar period.

### USE OF CROPLAND AND YIELDS

Land in farms in Maryland in 1943 was estimated at 4,175,000 acres. Of this, 2,167,000 acres were used for cropland and pasture. Table 1 shows the acreage distribution as reported for 1943, the goals for 1944, and the estimated acreage for 1945. Increases in livestock population and limited feed supplies have been forcing Maryland farmers to produce a greater acreage of grain and hay crops.

Maryland farmers tend to follow rather fixed cropping systems and generally keep a balance between cultivated crops, small grains, and hay. In recent years, production restrictions forced farmers to make adjustments which resulted in less acreage in corn and wheat and an increase in the acreage of barley, soybeans, oats, and grass silage; as these limiting regulations are removed, the recent trends in acreage of these crops are expected to be reversed.

#### Feed Crops

**Corn** is the most important feed crop produced in Maryland and is grown in all counties. Areas of heaviest production are in the Piedmont Plateau and the northern Eastern Shore, where most of the livestock is produced. The trend in corn acreage has been downward for several years, primarily because of govern-

ment programs, limited labor supplies, and a favorable price on purchased feeds. In recent years, feed prices have advanced rapidly and as the restricting regulations were removed the trend in corn acreage has stopped its downward flow and has been increasing slightly for two years. The acreage of corn in 1945 is expected to be near the 1938 to 1940 level of about 510,000 acres. With the increased use of corn silage and as more harvesting machines and hybrid seed become available the acreage may in a few years go to 525,000 acres.

**Wheat** acreage in Maryland in 1943 was at the lowest point in 75 years. The peak in production was 675,000 in 1917 and since that date it has declined to only 304,000 acres in 1943. All of the decline cannot be attributed to the Agricultural Adjustment Program; however, the rate of decline from 1937 to 1943 was the most rapid in history. Maryland farmers increased drastically the acreage of wheat planted in 1943, and the acreage harvested in 1944 exceeded 400,000 acres. Feed shortages and scarcity of labor are causing Maryland farmers to consider what feeds can be produced most efficiently. In this state, wheat is also a double purpose crop. In addition to the grain, the straw is urgently needed by dairymen for bedding. With less emphasis on soybeans, the increase in acreage of wheat for harvest in 1945 to 410,000 acres seems justified.

**Barley** acreage was expanded rapidly for many years. In addition to being a good dairy feed, the acreage was not restricted and the urgent need for feed caused considerable over-expansion, especially in the new Marnobarb variety. Barley acreage is expected to be decreased to about 60,000 acres or 21 percent below the peak acreage harvested in 1943. The primary factors which have caused farmers to reduce the acreage of barley are: (1) Yields have been decreasing; (2) heavy winter-kill on wet soil or in high altitudes; and, (3) a greater acreage is required to produce the equivalent of corn in food nutrients. The downward trend in barley acreage will be temporarily retarded by the high yields received in 1944; therefore, the acreage planted in 1944 for harvest in 1945 is expected to be about 70,000 acres.

Maryland farmers answered the call for more vegetable oils by materially increasing the acreage of **soybeans.** The acreage of soybeans for hay and oil was increased from 26,000 acres in 1930 to 116,000 acres in 1943. Unfavorable weather conditions in 1943 almost ruined the crop when the yield per acre was only 8 bushels. Maryland farmers have not been satisfied with soybeans; the difficulty in curing the hay and consistently low yields of beans are combining to reduce the acreage planted. With normal prices, soybeans cannot compete successfully with wheat in Maryland. The present price spread between wheat and soybeans will tend to retard the decrease in acreage of soybeans, but indications are that farmers are shifting from soybeans back to wheat. The total acreage of soybeans grown in 1945 is expected to be about 80,000 acres with 30,000 of the total harvested for beans and the remainder cut for hay or plowed under as a soil improving crop.

**Hay** production in Maryland is divided into four classes: (1) Alfalfa; (2) clover-timothy; (3) lespedeza; and (4) grain cut for hay and annual legume hay. Combinations of these types are produced in all sections of the State. In general, alfalfa and timothy-clover are planted on the heavier soils of the Piedmont Plateau

ESTIMATES OF USE OF CROPLAND—1945 WITH COMPARISONS

| Use of Cropland | Acreage | Reported for 1943 | 1944 goals | 1944 | 1945 |
|---|---|---|---|---|---|
| Column | 1 | 2 | 3 | 4 | 5 |
| | | 1,000 acres | 1,000 acres | 1,000 acres | 1,000 acres |
| Corn, all | Planted | 454 | 481 | 503 | 510 |
| Tobacco | Harvested | 32.6 | 37 | 37.5 | 41 |
| Irish potatoes | Planted | 22.5 | 23 | 19.8 | 22 |
| Sweet potatoes | " | 8 | 10 | 8 | 9 |
| Processing vegetables, total [1] | " | 160.3 | 158 | 158.8 | 146.7 |
| Fresh vegetables, total [1] | Harvested | 36.5 | 36.0 | 36.5 | 34.9 |
| Soybeans, grown alone | Planted | 102 | 120 | 110 | 80 |
| Soybeans for beans | Harvested | 36 | 49.8 | 50 | 30 |
| Cowpeas, grown alone | Planted | 5 | 3 | 4 | 4 |
| Cowpeas for peas | Harvested | 1 | 1 | ..... | 1 |
| Oats | Planted | 48 | 43 | 44 | 40 |
| Barley | " | 79 | 71 | 71 | 75 |
| All Wheat | " | 304 | 380 | 399 | 410 |
| Oats for grain | Harvested | 43 | 43 | 40 | 35 |
| Barley for grain | " | 76 | 71 | 68 | 72 |
| Rye for grain | " | 21 | 22 | 22 | 20 |
| Buckwheat | " | 5 | 5 | 5 | 5 |
| Hay, all tame—except soybean, cowpea, and small grain hay | " | 367 | 362 | 360 | 390 |
| Hay, all tame | " | 441 | 445 | 422 | 440 |
| Seeds, hay and cover crop, all | " | 18.0 | 21.1 | 18.6 | 22 |
| Rotation (cropland) pasture | ..... | 455 | 460 | 458 | 460 |
| Total cropland used for crops | ..... | 2050.4 | 2171 | 2167 | 2204 |
| Idle Cropland | ..... | 320 | 168 | 183 | 157 |
| Total cropland | ..... | 2370.4 | 2339 | 2350 | 2361 |
| Other plowable pasture | ..... | 145 | 140 | 145 | 140 |
| Wild hay | Harvested | 3 | 3 | 3 | 3 |
| Other land in farms | ..... | 1657 | 1657 | 1682 | 1671 |
| Total land in farms | ..... | 4175 | 4175 | 4175 | 4175 |

[1] Commercial crop.

and Mountain area, with the annual legumes and lespedeza hays on the light soils of the Eastern Shore and Southern Maryland.

The acreage of hay is expected to continue to increase. The drought of 1943 wiped out the normal carry-over and farmers will and should try to build a greater reserve for future use. For these reasons, the acreage of soybeans for hay is expected to remain high for probably two years.

Hay and pasture fields are getting better care. More hay and pasture land is being fertilized and limed and in some sections considerable attention is being given to better methods of curing hay to get better quality.

**Yields** of field crops should be at least maintained during the demobilization period, and yield of certain crops can be expected to increase. Expansion in the use of hybrid seed corn is expected to increase the yield of corn. Even with the

great increase in wheat acreage, the yield per acre should be maintained. As the acres less adapted to barley are reduced, the yield per acre is expected to rise. Hay yields are expected to be up and the quality should be improved.

ESTIMATES OF CROP YIELDS PER ACRE—1945 WITH COMPARISONS, MARYLAND

| Crop | Acreage | Unit | Yield Per Acre | |
|---|---|---|---|---|
| | | | Probable on Maximum Acreage [1] | Probable in 1945 |
| Column | 1 | 2 | 3 | 4 |
| | | | Units | Units |
| Corn, all | Planted | Bu. | 37 | 39 |
| Soybeans for beans | Harvested | " | 14.0 | 14 |
| Cowpeas for peas | " | " | 8.5 | 9 |
| Other domestic tobacco, Md. | " | Lbs. | 775 | 800 |
| Irish Potatoes | Planted | Bu. | 110 | 100 |
| Sweet potatoes | " | " | 190 | 175 |
| Oats for grain | Harvested | " | 30 | 30 |
| Barley for grain | " | " | 28 | 32 |
| Winter Wheat | Planted | " | 19.5 | 20 |
| Rye for grain | Harvested | " | 14 | 15 |
| Buckwheat | Planted | " | 19 | 19 |
| Hay, all tame | Harvested | Ton | 1.3 | 1.4 |
| Wild hay | " | " | 0.8 | 1.0 |

[1] Taken from 1943 State report on wartime production capacity (Form 2, Column 6).

### Vegetable Crops

Production of vegetables for processing and for the fresh market furnishes an important source of income to Maryland farmers. In 1943, the income from vegetables, excluding potatoes, was $21,642,000 which was exceeded only by dairy and poultry products. Few states exceed Maryland in the production of vegetables for processing, and the proximity to large cities, gives producers some advantage in producing for the fresh market. Vegetable production in this State is divided into two classes on the basis of intensity of acreage. Near Baltimore, vegetables are produced intensively and sold on the local market; and on the light soils of the lower Eastern Shore, they are produced extensively for local processing plants or for shipment to northern markets, depending upon the relative price.

The demand for vegetables for processing has been and is expected to be heavy. In an attempt to help in the war effort, Maryland farmers planted record acreages of essential vegetables. Production of tomatoes jumped from 66,800 acres in 1942 to 72,200 in 1943; the acreage for 1945 is expected to decline to about 60,000 acres. Snap beans for processing increased from 11,500 acres to 14,700 in 1943 and are expected to decline to about 11,500 acres for 1945. Sweet corn, the other major canning crop, increased from 47,600 acres in 1942 to 52,300 in 1943, and is expected to decline to 50,000 for 1945.

The total acreage of vegetables for processing is expected to be decreased from 160,300 acres in 1943 to 147,000 in 1945. Vegetables for market are expected to decline from 36,500 acres harvested in 1943 to 34,900 for 1945—a decrease of 1,600 acres.

ACREAGE OF TRUCK CROPS IN MARYLAND AS REPORTED FOR 1942 AND 1943 EXPECTED ACREAGE FOR 1944 AND PROBABLE ACREAGE FOR 1945

| Crop | | Acreage | | | Probable Acreage for 1945 |
|---|---|---|---|---|---|
| | | 1942 | 1943 | Estimated for 1944 | |
| Asparagus [1] | Mkt. | 2,300 | 2,300 | 2,100 | 2,100 |
| Lima beans | " | 1,500 | 1,500 | 1,500 | 1,500 |
| Green lima beans | Mfg. | 3,100 | 4,300 | 5,000 | 5,600 |
| Snap beans | Mkt. | 5,100 | 5,900 | 5,900 | 5,000 |
| Snap beans | Mfg. | 13,500 | 14,700 | 12,000 | 11,500 |
| Cabbage [1] | Mkt. | 1,400 | 1,700 | 1,700 | 1,400 |
| Cucumbers | " | 3,100 | 2,800 | 2,800 | 2,800 |
| Cucumbers for pickles | ..... | 3,500 | 3,600 | 4,100 | 4,100 |
| Peas | Mfg. | 15,200 | 15,900 | 12,800 | 13,500 |
| Early Irish potatoes | ..... | 5,000 | 6,000 | 5,400 | 5,400 |
| Spinach | Mkt. | 900 | 1,900 | 1,750 | 1,700 |
| Spinach | Mfg. | 2,100 | 900 | 1,200 | 1,000 |
| Strawberries | ..... | 5,100 | 4,000 | 2,800 | 2,000 |
| Sweet corn | Mfg. | 47,600 | 52,300 | 50,700 | 50,000 |
| Tomatoes | Mkt. | 7,200 | 7,200 | 7,200 | 7,200 |
| Tomatoes | Mfg. | 66,800 | 72,200 | 65,000 | 60,000 |
| Watermelons | ..... | 5,200 | 4,400 | 5,200 | 5,200 |
| Cantaloupes | ..... | 5,400 | 4,800 | 5,500 | 6,000 |

[1] Undetermined amount for processing.

## Livestock and Poultry

The agricultural pattern of Maryland is built to a large extent, around livestock and poultry. Soils of the Piedmont Plateau produce splendid pastures and nearby cities require large quantities of milk, poultry and eggs. For these reasons, Maryland might be classfied as a dairy-poultry State. The heavy expansion in livestock numbers caused many farms to be over-stocked. Farmers should now study their livestock pattern to see if more feed to less animals would yield greater profits.

Dairy—Originally much of the milk in this State was separated and the cream sent to market; in most of the dairy areas creameries purchased the cream and returned the skimmilk to the producers who fed it to hogs. The demand for fluid milk changed this system and today a very large percentage of the milk produced is sold for use in the "bottle trade." The principal dairy regions are now divided according to markets. Milk from the Piedmont Plateau is shipped to Baltimore and Washington for fluid consumption. In Washington County, the main outlets are Hagerstown and nearby Pennsylvania cities. In Western Maryland, the milk is sold in Cumberland and nearby towns in West Virginia.

Most of the milk produced on the Eastern Shore goes to Philadephia, some is sold in local cities and towns and the surplus goes to a local condensery.

Numbers of dairy cows and total production of milk in Maryland have been increasing for many years. Even the severe drought of 1943 failed to retard the steady rise in numbers of milk cows and total cattle on farms. A record of 216,000 milk cows were on farms on January 1, 1944; this is 4,000 head greater than the all-time peak number reported on January 1, 1943. The influx of war workers,

ESTIMATES OF PRODUCTION OF LIVESTOCK AND LIVESTOCK PRODUCTS, 1945, WITH COMPARISONS, MARYLAND

| Item of Livestock and Livestock Products | Unit | Reported for 1943 [1] | Estimated for | | |
|---|---|---|---|---|---|
| | | | 1944 | 1945 | 1946 |
| Column | 1 | 2 | 3 | 4 | 5 |
| On farms January 1 | | 1,000 units | 1,000 units | 1,000 units | 1,000 units |
| Horses, mules, and colts | No. | 96 | 93 | 91 | 90 |
| Cattle and calves, all | " | 355 | 366 | 370 | 370 |
| Cows kept for milk, 2 yrs. | " | 212 | 216 | 218 | 218 |
| Other cows, 2 years | " | 11 | 12 | 12 | 12 |
| Sheep and lambs, all | " | 56 | 52 | 50 | 48 |
| Ewes, 1 year | " | 45 | 42 | 40 | 38 |
| Hens and pullets | " | 3753 | 3998 | 3500 | 3900 |

| | | Reported [1] or estimated for 1943 | Estimated for 1945 |
|---|---|---|---|
| During Year: | | 1,000 units | 1,000 units |
| Sows farrowed, spring [2] | No. | 36 | 30 |
| Sows farrowed, fall [3] | " | 41 | 38 |
| Chickens raised [4] | " | 9,465 | 9,000 |
| Commercial broiler production | " | 21,000 | 18,500 |
| Turkeys raised | " | 364 | 400 |
| Milk cows, average during year | " | 204 | 206 |
| Milk produced | Lbs. | 945,000 | 965,000 |
| Eggs produced | Doz. | 34,166 | 32,000 |
| Cattle put on feed [5] | No. | 19 | 12 |
| Average weight hogs sold or butchered [6] | Lbs. | 195 | 200 |
| Net production of hogs | " | 86,685 | 72,000 |

[1] By the Bureau of Agricultural Economics except as otherwise indicated.
[2] December 1 (of previous year) to June 1.
[3] June 1 to December 1.
[4] Excluding commercial broilers.
[5] Twelve-month period beginning October 1.
[6] Weight in pounds instead of 1,000 pounds.

the increased birth rate and the policy of supplying milk to members of the armed forces have resulted in unprecedented demand for milk.

The future of the upward spiral in dairying in Maryland will depend on the demand for milk, the supply of purchased feed, the continuation of present health regulations, and the relation of milk prices to feed and labor prices. Indications are that cow numbers are nearing the peak and will now increase at a slower rate. By 1945, milk cow numbers are expected to reach 218,000 and remain near that figure until postwar economic conditions are determined.

The outlook for the dairy industry in Maryland will depend to a large extent on the success of dairymen in increasing production per cow. During the present war, total production has been increased by adding cows, but in the postwar years, economy in production will be a big factor. In recent years the average production in Maryland has been between 4,600 and 4,850 pounds per cow per year. With competing states averaging from 5,400 to 6,200, it is most urgent that farmers breed for increased production.

**Beef** production in Maryland is expected to decline. Numbers of beef cows are expected to remain near present levels. The feed situation has been most discouraging to steer feeders and cattle on feed for beef production are expected to decline rapidly.

**Hog** production in Maryland responded to prices by increasing about 30 percent in 1943 over 1942. Numbers of brood sows have been at high levels; however, the short corn crop of 1943 forced many farmers to curtail their hog operations. Hog production is expected to decline.

**Sheep** production in Maryland continues to decline and is now at the lowest level in many years. Competition with cattle for pasture land and the continued loss by dogs are factors responsible for much of the decline.

### Poultry

Poultry in 1943, became the leading farm income producing enterprise, in Maryland. Its growth in recent years has been due to great expansion in the production of broilers, the demand for eggs, and quality associated with Maryland-produced turkeys. Future production will depend upon the following factors: Feed supplies, fuel, quality of hatching eggs, and satisfactory prices.

Hens and pullets kept for egg production have been increasing, and on January 1, 1944, reached an all-time high of 3,998,000 head. The extremely tight feed situation will retard future expansion, and numbers on January 1, 1945, are expected to be reduced to about 3,700,000 head. The broiler industry has grown from a production of less than 2 million broilers in 1934, to 21 million broilers in 1943. The lack of feed, in general, and the extreme shortage of animal protein feeds are resulting in an increasing number of empty broiler houses. Production in 1945 is expected to be about 18,500,000 head; and unless there is considerable improvement in the feed situation, the production may be cut even further.

The present feed situation is the result of increased numbers of practically all classes of livestock and a heavy decrease in feed production and supplies. Under these conditions, it was necessary to decide which classes of livestock and poultry were to get the available feed. The decision was made that milk and eggs were

most vital in the present emergency; and, therefore, dairy cows and hens were to receive preference over other classes of livestock in the allocation of feeds.

Turkey production in Maryland in 1943 was only 364,000 head; however, for the postwar period, numbers are expected to be increased to about 400,000 head.

## FARM LABOR

### 1944 Experiences

The supply and wages of farm labor are major factors in determining the quantity of agricultural products to be produced. In normal times, the supply of permanent and temporary workers was adequate to produce and harvest the crops and care for the livestock produced in the State. These conditions were changed drastically by the war. Defense plants required great numbers of workers and many farm workers went into the various branches of the military services. As workers were being drawn away from the farms, the demand for food and fiber was increasing. In an attempt to meet these conditions, farmers used all available labor-saving machinery; and both they and their families worked extremely long hours to harvest record quantities of agricultural products.

Maryland farmers appreciated the sympathetic understanding of Selective Service in the fair way the law relating to deferment of farm workers was administered. Through the cooperative effort of Selective Service, the Maryland Farm Advisory Committee, and local committees on farm labor, it was possible to study individual cases which resulted in many essential workers being retained on farms.

To alleviate the farm labor shortage in 1944, city and town people helped during rush seasons, workers were recruited from other states, and inmates of penal and corrective institutions worked on farms. These indispensable workers were aided by imported workers from Bahama and Jamaica Islands. Probably the greatest aid in harvesting the 1944 crops will continue to be the use of war prisoners. On July 1, about 6,000 war prisoners had been made available for use on Maryland farms. They have already proved very satisfactory, especially in harvesting hay, wheat and barley.

The program for securing migratory labor is working smoother as a result of the receiving stations being set up along the Atlantic Coast. Recruitment this year has been less difficult and workers have received gasoline to move to other areas as the crop season changed. On July 1, over 1,500 migratory workers had been routed into Maryland; and, with increased camp facilities, less shifting around is expected.

In the postwar period, service men with farm experience should be demobilized as rapidly as they can be placed on farms. A Maryland boy on active duty wrote, "The quietness of the farm is the place the weary service man longs for. There is no roar of factories to remind him of battle, no crowding in small rooms to impair his health; and the work can be adjusted to his capacity; fresh food, fresh air, and plenty of sunshine are his." There is a place on Maryland farms for many service men with farm experience.

### Canning House Labor

The supply of workers for canning houses and other processing plants is closely allied to agriculture. In many areas the acreage of truck crops is determined by the

effective capacity of the canning houses. For these reasons, the various agencies cooperating to supply farm workers also assisted the United States Employment Service in procuring workers for canning plants. The supply of canning-house workers for the 1944 season is expected to be less critical than it was in 1943. A total of about 30,000 workers is normally required by Maryland canners during the peak of the season. On July 1, about 90 percent of the workers had been engaged.

The Maryland Extension Service has done a commendable job of administering the farm labor program, and the experience gained should expedite the work in future years.

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## RURAL INSTITUTIONS

### COUNTY RURAL ROADS

County road improvement has practically ceased during the war. Materials and labor have been difficult to obtain for maintenance work. Therefore, a backlog of road repair work is inevitable following the war. Furthermore, there is need for adding to the mileage of hard-surfaced, or improved county roads in many areas of the state.

Road work, is one of the governmental functions for which considerable public funds can be spent advantageously, even in normal times. Expenditures for highways usually make up a large proportion of the total state and local governmental expenditures. Therefore, following the war, roads will be in such condition as to justify expenditure of large sums for highway purposes. In addition, such projects can give employment to thousands of returning soldiers and former war workers.

Nearly one-half of the county road mileage in Maryland is unsurfaced. In Baltimore county, nearly 95 percent of the county roads are surfaced, whereas only 10 percent of the county mileage of Worcester county is surfaced. The Agricultural Census shows that 55 percent of the farms in Maryland were located on improved roads in 1940. Considering road improvements since 1940, it is estimated that nearly half the farms in the state now border unsurfaced roads, though they are not far distant from an improved highway.

The following factors should be kept in mind in developing the post-war rural road program:

1. Rebuilding of surfaced roads depleted because of inadequate maintenance is a vital step in preserving the investment in rural roads.
2. Additions to the improved, or surfaced, road mileage should be confined largely to low-type surfacing or improvements at relatively small costs per mile that would be approved by the state or local road engineer.
3. The needs for county road improvement, in terms of such factors as travel incident to the type of farm enterprise, operation of school busses, etc., should be the primary consideration in a road plan.

Many of the counties have accumulated a surplus in their gasoline tax accounts. The total amount of such surplus now exceeds $1,000,000. These funds, together with local property tax levies, should contribute the initial financial support for the county road improvement following the war. If it is then determined that such financial sources are inadequate to provide for necessary road improvements, and that further or high local taxation for such purpose seems undesirable, then funds made available by the State should be used to augment the local funds.

There are approximately 11,000 miles of county roads in Maryland. About 4,200 miles of these roads are unsurfaced. Therefore, materials will be needed to rehabilitate 6,800 miles, most of which have received inadequate maintenance during the war. This will take many thousands of tons of stone and oil, and a large labor force. In addition, it is reasonable to contemplate that as many as 1,000 to 1,500 miles of unimproved roads should receive some kind of construction or improvement in the years immediately following the war. This could represent an expenditure ranging from $3,000,000 to $10,000,000, depending upon the type of improvement involved. Such expenditure would be largely for materials and labor.

Much of the equipment manufactured for war purposes, such as bull-dozers, scrapers, tractors, trucks, and hand tools, should be made available to state and local governments for road work at the close of the war. State and county committees should be formed to deal directly with the proper Federal agencies in securing this equipment.

Concentration of war production industries in Maryland, together with movement of troops and supplies, has placed an extraordinary traffic burden on many highways in the state. Adequate maintenance of these roads has been impossible, hence the surface and roadbed of such roads will require major reconstruction work following the war. These circumstances should be taken into consideration in the post-war period in the allocation of Federal-aid road funds.

## TAXES

Prior to the war, property taxes constituted the major direct tax obligations of farmers. In the immediate future, Federal income taxes will also be important to farmers.

The present fundamental difference between property and income taxation as they effect farmers is that property taxes are payable and collectible regardless of the income status of the individual owners. Therefore, if farmers face periods of economic adversity, a high property tax could result in a repetition of the disaster produced by farm tax delinquency during the last depression.

Hence, farmers should unite in their efforts to prevent a rise in local property taxes following the war. This can be accomplished mainly in two ways: First, by insisting on economical operation in local and state governments. It may be necessary to revise local and state governmental structure and bring about certain desirable consolidation in order to prevent increases in property taxes for necessary governmental functions. Second, a broad state taxing program, with local governments sharing in the revenues, will lessen the local property tax burden.

A considerable part of the tax difficulties of farmers arise from unequal tax burdens due to faulty tax assessments. Improvements in the technique of assessing properties will result in better distribution of the local tax burden. Greater emphasis could be centered upon more scientific methods of comparing farm land and buildings for purpose of tax assessments. A greater proportion of the tax on farm property should be based upon those properties which contribute most to the income from the farm.

The large Federal debt will require heavy income and excise taxes for many years. Farmers should prepare to bear their share of this war cost. Current Federal expenditures for ordinary governmental services have increased following wars in the past. It is essential that the people recognize the importance of maintaining a proper balance between national income and current post-war governmental cost payments, especially Federal costs. To service the large Federal debt, and to meet the current governmental obligation, it will be necessary to maintain a high level of national income after the war. To insure a high national income, we must be able to utilize fully our manpower and resources and develop a more extensive international trade. Governments should be able to pay their obligations from taxation which does not stagnate the economic system or impair its security.

A large percentage of farmers will need to file income tax returns. This requirement will be made easier, and more accurate returns will result, if the following measures are taken:

1. Record keeping by farmers, in which the records serve for income tax purposes, as well as for farm business analysis.
2. Simplification and clarification of the farm income tax schedule.
3. Modification of the income tax law so as to prevent wide differences in tax obligations on similar farm incomes over a period of years, due to differences in extremes of income, or to differences between the cash or accrual method of computing income.

Every farmer should study his type of farm business and his personal situation to determine whether the cash or the accrual method of computing income will cause him to pay his proper tax liability. Such observation is not for the purpose of escaping taxation; its purpose is to prevent, as much as possible, excessive tax payments due to fluctuations in income.

## CREDIT

Farmers need three kinds of credit: Long term credit, intermediate credit, and short term credit.

Long term credit is needed for buying land and erecting buildings, for constructing silos, building fences, irrigation and clearing of land.

Intermediate credit is needed for purchasing machinery and work stock, planting orchards and vineyards, purchase of livestock and feed, and marketing of farm products.

Short term credit is needed for purchase of seed, fertilizer, hired labor, purchase of livestock, and for living expenses.

The Federal Government in the last 25 years has become increasingly interested in the farm credit problem and has gradually designed a system of farm credit to

meet the specific needs of farmers. These credit institutions should continue to be farmer-owned and controlled. In spite of these new agencies, many farmers still patronize certain credit agencies and pay high interest charges.

The total farm mortgage debt outstanding in Maryland has declined from $43,135,000 in 1939 to $39,349,000 in 1943, a decrease of 8.8 percent. Farmers in Maryland with increased income have been using a part of this income to curtail their long-term debt obligations. While farm mortgage debt has been declining in Maryland, as well as throughout the nation, there may be tendency within the next year or so for mortgage debt to increase. A farm land boom now under way is threatening to get out of hand. Farms are turning over at a rate higher than in the boom period of 1919-20. City people, more than farmers, are stirring this land boom. These city people with money look upon farm land as one form of insurance against inflation they are told to fear. Yet, in practice, it is turning out that the inflation of farm land values really is one prime example of inflation itself. Farm real estate values in Maryland have risen 36 percent since the beginning of World War II, which is exactly the same rate of increase as occurred during the four years of World War I.

With high levels of income in the next year or so, people will be looking to farms as a source of investment. Many returning soldiers, as well as people demobilized from war plants, will be interested in locating on full-time or part-time farms. Credit could contribute materially to the right kind of settlement of returning soldiers and, unquestionably, increased amounts of credit will be required. Credit adaptable to the needs of the different types of purchasers should be made available. Caution should be exercised not to grant credit too liberally, especially on inflated real estate and commodity values. When ex-soldiers, as well as others, are placed on farms, if their major income must be obtained from the farm, care should be taken to see that the factors of production are in balance, and that the farm is capable of being operated as an efficient unit.

Several thousand acres of land in Maryland are held by the Government for military purposes. Farm families were removed from much of it. A sizable portion of that land will be available for return to agriculture. Sale of these and other farms to young men of character and capacity who will be returning from military service or war industry offers an opportunity to stimulate the ownership of family-sized farms, with all the benefits to food production, to rural life, and to citizenship. Likewise, such sales offer an opportunity for agricultural leaders to attempt to prevent transfer of land for farming purposes that is not adapted to those purposes and cannot be made a sound and profitable farm unit.

The back-log of purchases of farm machinery and equipment, materials for repair and construction of farm buildings, and supplies for the farm home will be large in the post-war period. A part of these purchases can and should be made from accumulated savings. However, the demand for money with which to make these improvements will be heavy during the first two or three years after hostilities cease.

The chief credit problem in Maryland is in the cash crop areas, primarily on the Eastern Shore. Merchant credit is commonly used in this area, probably because it can be obtained quickly, easily, and without the use of collateral. A study of short term credit on the lower Eastern Shore in 1940 indicates that the pre-

vailing interest charge on merchant credit for purchase of fertilizer averaged 23.3 percent. On 30-day merchant fertilizer accounts, the interest rate was 96 percent. On all types of merchant credit accounts on the Eastern Shore, the average interest charge was 18.6 percent. The average interest charge on cash loans was 5.6 percent.

Farmers, particularly in the cash crop areas of Maryland, should be better informed on the established sources of credit and the saving that might be realized by utilizing some of these agencies. More cash credit should be used in preference to merchant credit. What is needed most to strengthen the work of the agencies making cash loans to farmers is to conduct an extensive educational campaign to acquaint farmers with the various types of loans available in their communities; purposes for which the loans may be used; security required, repayment terms, interest rates, and eligibility requirements.

It would seem that the number of credit agencies serving farmers is ample, and, perhaps, in some cases, more than necessary, resulting in considerable overlapping and confusion. Certainly, it would not be desirable to create any new credit agency after close of the war to finance soldiers and others who may wish to become established in agriculture. The present credit agencies should be able to cope with this problem, and they should be making plans now for financing the credit needs of farmers in the post-war period.

## TENURE

No material change has taken place in the percentage of farms in Maryland operated by tenants since 1880. The principal tenanted areas are in Southern Maryland and the Northern Eastern Shore.

There is nothing particularly alarming about the tenant situation, except in a few counties, so far as the extent of tenancy is concerned. The solution to tenancy ills in Maryland lies primarily in improving landlord-tenant relationships, rather than in making provision for more owner-operatorship. Many of the tenants move each year. The expense of moving, disruption of social ties, and increased management problems are attending evils. However, some moves from poor to better farms, or from small to large farms, as well as moves to obtain better leasing arrangements, are justified.

To improve the situation, there should be a modification of the lease agreement, particularly in the upper Eastern Shore area. Either some form of a crop-livestock share lease should be adopted, or a change should be made in the present form of lease to compensate the landlord for improvements made to buildings. A modified form of leasing agreement has been worked out by the Department of Agricultural Economics at the University of Maryland, which permits the tenant to own the livestock and receive the income from the same, but provides that the tenant compensate the landlord for use and occupation of the dairy barn, milk house and silo by paying an annual rental of so much, figured at 7 percent of the cost, payable in monthly installments. This form of leasing agreement should be presented to both landlords and tenants at joint meetings, and should be put into operation as rapidly as the change can be made.

Father-son partnerships should be encouraged and put into operation wherever such arrangement is possible. This would offer added inducement for returning

soldiers and persons from war industries, with farm experience on the home farm, to return to agriculture as joint owners or tenants. Furthermore, it might make it possible to enlarge the size of the farm unit for more economical production. The average size farm in Maryland is about 100 acres, and 40 percent of the farms in 1940 were under 50 acres in size. The average farm unit is too small to permit maximum use of labor-saving machinery, and too small to return a sufficient income to enable a farm family to live comfortably and well, to say nothing about supporting two families. Wherever possible, the size of the farm unit should be enlarged. In areas of the state where tenancy is prevalent, tenants might operate two or more farms that are contiguous or near enough to facilitate the movement of labor, machinery and supplies.

It is suggested that a study be made of farm tenancy and leasing arrangements in Maryland. Such a project would have the following objectives: (1) To determine the extent and type of tenancy in each agricultural area; (2) to ascertain what the provisions of leasing arrangements are in each type of tenancy area; (3) to determine the equitableness of the division of the inventory, receipts and expenses between landlords and tenants; (4) to prepare representative leasing forms for farms in different areas of the state; and (5) to suggest ways in which the tenancy situation in Maryland might be improved.

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## RURAL HOMES

Some of the essentials in a post-war program for the farm home are considered to be:

1. That planning ahead is good business.
2. That the homemaker of the future cannot shirk responsibilities which are related to the home or welfare of her family.
3. That family life is a joint responsibility. There has to be planning together in the family for health, good nutrition, education, spiritual guidance, family economics, recreation, culture, living together, and everyday values.
4. As homemakers, we will continue to be guided by the Extension Service and depend upon the Service to keep us informed on all research findings that affect efficiency of our homes.

### Management

Objectives of the post-war management should include:

a. Planning of convenient and comfortable farm homes, either new or remodeled.
b. Better knowledge and appreciation of the economics of running a home, including planning of budgets, keeping farm and home accounts, and time studies.
c. A knowledge of new equipment and its value to better farm living. Example: Home freezer units, heating and cooling systems.

d. Reliable information on building materials, house plans, electrical equipment, etc.
e. A management program will include home furnishings and their value to morale of the family. There will be many changes in construction and selection of home furnishings and advice will be needed on how to buy wisely in refinishing and refurnishing farm homes.
f. An interest in price levels for goods we produce, so that we may take doubt from the worth of our labor.

## HEALTH AND NUTRITION

There will be a strong carry-over in the post-war period from the extra attention given to family nutrition during the war. Nutrition programs must reach boys and men, as well as girls and women. The need for nutrition education is not limited to any economic level, and it must consider the whole food problem of the family and of the individuals. This will mean planning in large enough units for the family's foods— producing, buying, preparing and serving. For example: Gardens must be planned to meet the needs for early fruits and vegetables, and meals must be planned in no smaller unit than for the day.

The following objectives are recommended:

a. Have a year-round garden on every farm and village lot with a succession of crops of ample varieties in sufficient supplies for needs during the season and to preserve for winter needs.
b. Plan ahead for the whole year's food supply.
c. Emphasize home preservation and storage.
d. Plan better meals and buy wisely.
e. Prepare foods skillfully to prevent waste.
f. Cooperate in plans to promote better nutrition.

## EDUCATION

There should be an educational program that will teach children the practical essentials as they will be needed in every-day living. A course of study in our schools that will prepare the youths to meet life's problems in every-day living is desirable.

Due to income taxes, farm families will need help in bookkeeping, and budgeting.

We hope to see recreation on a family basis, such recreation to include music, reading, nature studies, and general culture subjects.

We want a program in home life that is practical, where everyday values can be appreciated.

## CLOTHING

Homemakers should be kept advised on short-cuts in methods of construction; informed on new textiles available; how to buy clothing for the family; how much good clothing should cost; what is good construction; how to look well groomed on the amount of money we have to pay for clothing.

Committee:

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## RURAL YOUTH

### Summary of Recommendations

1. That a good, workable guidance program be established for rural youth.
2. That Extension forces be increased to provide more agents particularly qualified to work with rutal youth (Two per county—one for girls and one for boys).
3. That provision be made for rural youth to have educational opportunities along individual needs and desires, such as specialized courses of 6 to 8 weeks in rural communities, evening sessions.
4. That recreation leaders be provided, who will train leaders at the community level.
5. That rural youth have representation on all rural organizations.
6. That farm and home management facilities be increased in the state.
7. That more recognition (not monetary) be given to volunteer leaders who work with rural boys and girls.
8. That patterns of agreement be worked out for father and son partnership, thus providing ownership for sons in event of passing on of the parent.
9. That opportunities be provided for rural people to have public facilities on the same basis as do city people.
10. That special credit facilities be established, when things are on a normal basis and we do not have inflated prices, to help worth while young people who need a financial start so that they may become farm owners and constructive community leaders.
11. That adults be awakened to the importance of youth to the welfare of this nation and the responsibility leaders have to train youth, so they may be ready to assume direction of community and national activities in the near future.

### THE SITUATION AFFECTING RURAL YOUTH

**At Present**

More than 1,200,000 farm boys are in the armed forces. Many have left school to manage farms. Large numbers have migrated to the city and are earning high wages. Those on farms are working long hours, taking little time for recreation. Three million rural youth are engaged in industry. Men are now returning from the armed services at the rate of 30,000 to 75,000 a month. Fewer young men are being deferred. Rural youth near wartime industries are feeling the influence of homes broken up by parents being employed away from home.

Many farmers are retiring. Men in armed forces are having good nutrition. More farmers are rejected, according to army examination records, than any other kind of workers. Youth returning from the war are familiar with discipline and self-control. Farmers are awaiting return of trained help. Many returning are disabled, some will be able to do certain skills well.

**Just Ahead**

It will be necessary to absorb 350 to 500 men per county. One farm in every 7 will need to find a place for a man. If there is less industrial activity, then more men must be placed on farms. Education was guaranteed by the President for returning men. Probably one million will want this. Will education be provided the farm boys who left school to produce food?

Production will need to be kept above normal for some time to come. Industry and government are making plans to relieve unemployment, in such ways as road building, greater production of civilian goods, increased guidance for youth, more educational facilities, etc.

All youth will be more mature (will have forgotten how to play). Moral standards of some will be changed. Many in armed forces are followers, perhaps will always need a "boss." Truck drivers who are now majors may not want to return to truck driving, yet what will they be trained to do?

Men returning will need and desire to earn a living. Jobs will be open to those better educated and trained. Many who left school to work in industry or manage a farm for the duration must soon decide whether to return to school or stay on the farm.

Employers will raise standards when employees are more plentiful. Returning men will be restless as a let-down from tenseness. Fewer people will be needed to produce food. Farms will be more mechanized. More efficient and practical farming methods will be adopted. There will be greater freedom from labor hardships, machinery will be cheaper, every farmer owning more, and home appliances will be more economical and numerous.

There will be fewer independent farms. A depression might mean that youth who desired to farm would have to start from rock-bottom. Youth desiring a college education need to be trained to have a voice in farm problems.

There will be greater mingling of races—prejudices must be overcome. Returning soldiers will want homes—many never had one since they married. Boys coming back may demand a more practical education. Farmers will be more appreciated by city people.

War Bonds will be spent. There will be a wave of advertising and buymanship information will be needed. Returning youth may have definite ideas on making plans for themselves, through legislation, etc.

More easily built and cared for homes will add to general attractiveness of rural life.

**What Can Extension Do To Help Rural Youth, and What Can Rural Youth Do Themselves?**

*Organization*

Appoint a State Recreation Specialist.

Appoint Assistant Agents to do 4-H Club work.

Stress importance of education through neighborhood visits and friendliness.
Build up prestige of local leaders. Larger number of local leaders must be found and trained, if more young people are to be reached.
Encourage adult organizations to make greater provision for youth to meet and work with them. (Senior Council member of Board of Directors of Farm Bureau, for example).

*Education*

Full, or partial, scholarships (Agriculture and Home Economics) at University of Maryland for rural youth who are members of rural organizations; one boy and one girl per county.
Teach youth in 4-H Clubs:
Practical farming and home making that may not be given in local school.
How to work more efficiently.
How to get along with others.
How to work for an employer.
How to overcome race prejudices.
Discuss systems and working of local and national governments.
Discuss disadvantages of regimentation and advantages of democratic organization.
Give instruction regarding obedience to law, order, justice.
Study and learn distinct contributions each race has to offer.
Learn to "discuss" and do own thinking.
Use all educational facilities available, reading, movies, projects, talks.
Discussions following legislation and marketing trends: World market conditions, relasing of tariff barriers, changes in production of consumer goods.
Consideration of cooperative markets.
More efficient farm organization to carry farmers' voice to legislative chambers.
Senior Councils represented at Local Farm Bureau.
More guidance for youth—vocational, financial (credits).
Teach privileges and duties of good citizenship.

*Stress Importance and Joy of Work*

Give training to help make necessary adjustments to urban life for those who will go to the city. (400,000 annually in normal times leave rural for non-rural employment in U. S.)

*Recreation*

Hold training schools in counties for recreation leaders.
Provide recreation for all ages and all organizations in the community.
Sponsor good places for youth to go.

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## EDUCATION

It is expected that at the close of the war a large number of persons from the armed forces will return to high schools and colleges for education and many civilians now in war industries will need education for readjustment. There is the

further fact that a sound agricultural economy is an integral part of a sound national economy. With these facts in mind, the following recommendations are offered:

A. **At the College Level:**

1. That the College of Agriculture retain its present flexible curriculum program in order to meet the needs of the various groups, including those returning from the armed forces, who will seek entrance after the war.
2. That in the interest of those returning from the armed forces the College of Agriculture offer such highly specialized courses, two-year courses, professional courses and graduate courses, as interests and opportunities demand.
3. That the College of Agriculture provide follow-up field training for returning soldiers who pursue systematic college instruction and locate on Maryland farms.
4. That the military training and experience of those returning from the armed forces be given greatest possible consideration for college credit in the various curriculums in the College of Agriculture.
5. That insofar as possible all special education for returned veterans, as well as others, be handled through existing agencies, thereby avoiding new and duplicating agencies.
6. That the Land-Grant Colleges continue to serve as a coordinating agency in evolving a coordinated program of agricultural education between the various states, regionally and nationally.
7. That the cost of education at the University of Maryland for students from Maryland be reduced to the lowest possible minimum, not in any way through a reduction in the quality of instruction but through greater participation in State aid.
8. That the College of Agriculture consider the possibility of offering extension college courses for credit.
9. That the College of Agriculture continue to give orientation courses which may be elected by students in other Colleges at the University of Maryland.
10. That the work experience records of agricultural students continue to receive emphasis, and that work experience be considered a part of a student's accomplishment.
11. That the University of Maryland be commended for the recently developed curriculum in Agricultural Engineering and for adjustments made in this direction.
12. That the University of Maryland consider carefully the need for a school of Veterinary Medicine.

B. **At the Secondary School Level:**

1. That departments of vocational agriculture, forced to close during the war, be restored and new departments be opened, where situations warrant, as rapidly as conditions permit.
2. That special facilities be provided for establishment of part-time and adult instruction in agriculture and related subjects in community and neighborhood centers where need exists.

3. That the opportunity for farm machinery reconditioning and repair be continued wherever feasible.
4. That county school officials give due consideration to providing especially constructed housing facilities for departments of vocational agriculture.
5. That where feasible, in the interest of better educational opportunity, small rural high schools be consolidated.
6. That school authorities make provision for sectioning vocational agriculture students with other groups of pupils and thus avoid the social stratification that results from placing them in special groups.
7. That a study be made with a view to establishing the Junior-Senior school system in the State as a whole, reducing the size of classes in schools, and adapting special education, such as agriculture, to the needs of small groups.
8. That special consideration be given to offerings for sub-secondary groups who may return from the war to the farm.

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## REHABILITATION OF FARM PLANT AND EQUIPMENT

The subject of farm plant and equipment is an extensive one. It includes:

1. Farm machinery, including farm power, farm field and processing machines, and farm transportation equipment.
2. Farm houses, including farm utilities such as light, heat, water supply and sewage disposal, as well as the farm storage and service buildings.

### Farm Machinery

Wartime restrictions on manufacture of farm machinery have reduced the number and mechanical condition of machines on Maryland farms to low levels. However, as the farm equipment industry swings back into capacity production with the close of the war, this condition should correct itself rapidly. The rate of this recovery will depend in large measure upon farm purchasing power.

To alleviate wartime shortages of farm machinery, the State Department of Education has established a large number of farm machinery repair centers. These centers have done an excellent job. Working with adequate tools and equipment, farmers have demonstrated unsuspected abilities in repair of machinery and in the design of new labor-saving devices.

This opportunity for farmers to repair and construct their own equipment should be continued into the post-war period. The Sub-Committee recommends that the State Department of Education provide facilities consisting of buildings, tools and equipment for this purpose. Such facilities should be connected with, and administered by the high school departments of vocational agriculture.

### Farm Buildings

The close of the war will find Maryland farm homes and farm buildings in poor condition. Many will need major repairs, many will be obsolete or inadequate. An extensive program of remodeling, modernization and new construction will be needed. As evidence of this conclusion, the 1940 census shows the following farm values in Maryland:

| | Land & Buildings | Land Only | Buildings Only |
|---|---|---|---|
| 1930 | $355,300,000 | $197,600,000 | $157,700,000 |
| 1940 | 273,980,000 | 144,698,000 | 129,282,000 |
| Depreciation, dollars | 81,320,000 | 52,902,000 | 28,418,000 |
| Depreciation, percent | 22.9 | 26.7 | 18.0 |

The Maryland Farm Housing Survey, made in 1934, shows that:

1. About 50 percent of the houses were more than 50 years old. Only 6 percent were less than 10 years old.
2. Less than 25 percent had improved toilet facilities.

Contributing to the present condition, therefore, are:

1. A low standard of rural homes and farm buildings in 1930.
2. A further depreciation for the period 1930-1940.
3. Limited new construction and maintenance since 1940, due to scarcity of labor and building materials.

### A Suggested Program

At a very conservative estimate, Maryland farmers may be expected to spend $1,000 per farm during the first few post-war years on rehabilitation and new construction of farm buildings. This is $40,000,000 for the State. On a national basis, such a program would be of tremendous value in creating industrial markets and preventing unemployment.

Farm buildings are premanent improvements. Every effort should be made to insure that they are conrrectly designed, efficient and economical. To realize this objective, we should have:

1. An educational program, designed to bring design and construction standards in line with present knowledge. This calls for a program of education and demonstration by all available agencies. Chief among these is the Extension Service.

2. A research program, designed to extend our present knowledge in the fields of farm building design, construction economies, and the adaptation of new building materials. This program should be assigned to the Agricultural Experiment Station.

The Extension Service now has an excellent farm building plan service. Complete plans are available for a great number of types and sizes of farm buildings. But, this is not enough. A complete extension program should provide competent architectural and engineering advice and assistance for the farm family that wants to make building improvements. It should give training to develop the latent

skills of the farmer and his sons. It should help with plans for remodeling the present buildings or for new structures, and provide instructions in reading blue prints and in the simpler building operations. The program should enlist the cooperation of the building material dealers and the rural carpenters and builders. It should sponsor the holding of building schools and demonstrations in rural communities, foster enthusiasm for good building, develop neighborhood cooperation in purchase or preparation of material and in use of power tools and equipment, and find ways to apply modern technology to the solution of the farmer's building problems.

Much remains to be learned about farm buildings. As an example, Maryland sweet potato growers normally lose about 25 percent of this crop in storage. Research at the University of Maryland indicates that with proper buildings and management this loss can be reduced to 2 percent. New crops, new processes, new methods, new materials all call for further study to design the best buildings. Problems of tobacco curing and grain storage are pressing for solution.

The Sub-Committee urgently recommends, therefore, that the University of Maryland increase substantially its program of extension and research in the field of rural homes and farm buildings.

### Financing of Farm Construction

Adequate credit, with a pattern of interest and principal payments adapted to the special conditions of farming, should be provided. Payment dates should be synchronized with income dates for each particular type of farming. Provisions should be made for extension of loan and waiver of interest in years of crop failures. Loans should be made by local financial institutions, with Government regulation and insurance, as under the Federal Housing Administration.

The Sub-Committee recommends the establishment of credit facilities for rehabilitation and new construction of farm homes and buildings, patterned after the F. H. A., with special provisions for farm conditions.

### Restrictions on Construction

It is both reasonable and necessary for the government to provide that farm requirements be given special consideration as restrictions on civilian construction gradually are lifted. In other words, restrictions on farm buildings might reasonably be lifted ahead of those on most other types of construction, as soon as materials and equipment become available for non-war use. The proposal is particularly appropriate and feasible because farm homes and structures as a rule use only the more basic materials, which will be among the first to become available. It further recognizes the accumulated deficiency created over many years, in farm buildings, and will help to insure that post-war farm purchasing power will be used for non-inflationary purposes.

The Sub-Committee recommends that restrictions on farm construction be removed at the earliest possible moment consistent with military needs.

HARRIS CORDDRY, *Chairman*
RAY W. CARPENTER, *Secretary*

## FARM ORGANIZATIONS

All true farm organizations have as their objective the advancement of those engaged in agriculture by improving their business and enlarging their social opportunities. As progress in this program depends largely upon the general prosperity throughout the nation, every effort should be made to encourage a national program of abundance backed by labor, industry, government and agriculture. Increased efficiency in production and distribution is essential and can be secured through application of the findings of research and study.

Strong, vigorous farm organizations, working together, are needed to assure agriculture its place in the councils that are to remold the pattern of our national and state economy. A larger membership plus a sound program based upon the foregoing general principles will give farm representatives additional strength toward its accomplishment.

### Build Unity

Maryland farm organizations have made a remarkable membership growth in the last five years, but more members are needed to attain a minimum goal of 50 percent of our farmers in organizations. It is safe to say that in 1944 less than 25 percent of Maryland farmers are identified with the general and cooperative organizations working to help all farmers. Our first step should be to secure unity among these organizations and the leaders within the individual groups. We suggest the adoption of a policy of mutual boosting among farm organizations. For instance, Farm Bureau members boost the Grange, and members of these general organizations boost the cooperatives, both marketing and purchasing, and vice versa. Some medium is needed to accomplish this unity. It can be through the activation of the Maryland Agricultural Society, or the formation of a Maryland Agricultural Council similar to those functioning in Pennsylvania, New York and other states. The next job is to enroll more members in farm organizations.

### Build Membership

An informed, active membership is the strength of any organization. It is each group's responsibility to make its own plans for enrollment of farmers as its members or patrons. All acquisition plans follow the same general outline for building membership:

a. Create interest through publicity and service.
b. Build membership through personal contact.
c. Inform the membership through meetings, publications and mail.
d. Develop leaders through discussion groups and other activities.
e. Encourage participation of farm women and farm boys and girls in the organization or through an auxiliary.
f. Carry out a program based on the individual, community, county, state and national needs and wishes, as determined by the local groups.

### Program

The program for organized agriculture in Maryland starts with the individual farm and includes community, county, state and national projects and policies. Among these are the general goals of information through increased research and education, the sponsorship of present cooperatives and development of needed

services, the strengthening of cooperative finance, a rural health program, continuation of soil conservation service and drainage, and helpful legislation state and national.

### Information

**Research**—Work for increased state and national funds to continue present studies and start others.

**Education**—Get more funds for the Extension Service to bring developments in farm practices to farmers.

**Suggestions**—Continue studies in crop and livestock production, disease and parasite control, and marketing. Enlarge services in soil conservation, drainage, agricultural engineering, and the science of farm management. Efficiency of production should be the watchword of all.

Research and education are aimed to help the individual farm operator in the conduct of farm business. Much progress has been made and more lies ahead in the use of farm machinery in production and preparation of products for market. More processing of products on the farm has been termed vertical expansion. Some contend that this is a solution to the farm problem. Increased agricultural engineering advice and services are needed for proper guidance of farmers.

Efficient production methods will be necessary to operate our farms at a profit in the years ahead. The science of farm management tells how much and what to grow, where the profits and losses are. Farm management services should be increased to provide this information and assist farmers in keeping proper records so necessary these days.

Marketing and distribution of farm products to consumers need special emphasis. Less has been accomplished in this than in production, although it is of equal or greater importance. While many of the faults and barriers to efficient distribution are national, we must concentrate on marketing improvements in the state and work with national groups to correct basic faults.

Discussion groups are the most effective way to reach farmers. The Extension Service should assist organizations in the expansion of their discussion group programs.

### Cooperative Development

Cooperatives are the farmers' strongest asset in the economic battle. Results obtained through their business activity are definite and permanent. As experience and capital are built up, the benefits from these organizations will increase.

Development along the following lines should be stressed:

1. **Purchasing Cooperatives**
   a. Back and build the present ones and assist in expanding their services.
2. **Marketing Cooperatives**
   a. Back and build present dairy marketing cooperatives.
   b. Back other marketing cooperatives, like Farm Bureau Wool Pool.
   c. Promote and sponsor needed marketing services for grain, vegetables, fruit, livestock, eggs, poultry (dressing plants), or other commodities, where practical.

3. **Special**
   a. Promote the extension of rural electric cooperatives.
   b. Encourage and sponsor in communities such special services as frozen food locker plants, special service cooperatives, seed cleaners, and others that may be needed.

We recommend continuation of the courses in cooperation offered by the University of Maryland and inclusion of these studies in the curriculum of the state school system.

We recommend that all farm organizations stand together and vigorously oppose the National Tax Equality League in its attempt to destroy the cooperative movement, as evidenced by the move to repeal the co-ops' exemption from the Federal income tax.

## Cooperative Finance

The farm credit system was developed to fill the needs of farmers and their organizations in the strenuous times after World War I. It has done well in providing credit for production, for land purchase, and cooperative development. These services will be needed in the aftermath of World War II, and must be guarded against the attacks of groups who contend they are no longer necessary.

Farm organizations and their members should utilize the services of Farm Credit and participate in their management. Farmer support is necessary to insure the continuance of these services on a cooperative basis so that farmers will have credit when it is needed. We recommend that careful study be given to the possibility of consolidating all governmental agencies furnishing credit to farmers into one organization.

## State Legislation

**Tax Program**—A unified legislative program that will utilize the strength we have is essential to maintain the gains made and to secure additional ones. Adoption of the Grange-Farm Bureau tax program after years of effort has placed Maryland on a sound financial basis. The tendency of the administration is to reduce the income tax regardless of agriculture's need for increased funds, the long-time need for a substantial state surplus, or the announced program to eliminate the state real estate levy. A strong stand must be taken for more funds for the agricultural programs of the University of Maryland, for elimination of the state real estate levy. We will, therefore, oppose reduction of the state income tax.

**Baltimore Wholesale Fruit and Vegetable Market**—Facilities are inadequate and are now being studied by a commission. We endorse the plan to improve these facilities by enlarging the farmers' market in the Camden area, and urge that all groups back this project.

**Mastitis**—This disease of dairy cows now causes more production loss than any other animal disease. An intensive program to eliminate mastitis has been recommended as the No. 1 Maryland livestock conservation measure. We approve this move and will support legislation and funds necessary to carry out this campaign.

**Medical Care**—The committee on medical care of the State Planning Commission has recommended a comprehensive medical care program for Maryland. This provides for a division in the State Department of Health to carry out the

program in the counties. It is a start toward better medical care for rural people through the public health service, in cooperation with the Department of Public Welfare, based on the private practitioner. This program has the endorsement of the Maryland Medical Association and we recommend it to all farm organizations.

**Soil Conservation**—As carried on through the 16 soil conservation districts in Maryland, this is one of the most important projects to insure permanent, efficient crop production. Farm organizations supported the enabling legislation and should work for the appropriations needed to conduct this program more vigorously.

**Other Projects**—Protection of farm products against strike damage, improved egg marketing, control of Bang's disease, European corn borer, and Japanese beetle control, artificial breeding of dairy cattle are among the many projects that will need farm organization support in the future.

All organizations should be constantly on the alert to back these and other helpful legislation that may arise, and to oppose all legislation harmful to agriculture.

## National Policies

National policies determine the economy of the country and how the various units function. As farm organizations will have a voice in making these policies, state and county members have a duty to inform themselves on the issues and their solution.

*Maintenance of world peace* is the foremost issue. Under a policy of isolation the United States has been forced into two World Wars, and can no longer dodge the role of aggressive world leadership for the perpetuation of peace. The questions are how far to go in cooperating with other nations to insure peace, whether to maintain our armed forces through compulsory training or voluntary methods, and what changes are necessary to provide adequate development and unification of our national defense.

*Demobilization* presents an enormous task that demands planning and impartial administration. The best recommendation noted to date is for Congress to establish a National Demobilization Board of outstanding citizens with complete policy-making authority over all demobilization problems. It would delegate various tasks to qualified agencies; for instance, assign the U. S. Department of Agriculture the job of disposal of surplus foods, land and equipment useful to agriculture.

*Wartime Restrictions* under OPA, ODT, WMC, NLB, and others have been necessary in wartime to ration goods and control prices. They interfere with the natural flow of goods, cause loss to farmers, irritation and waste of time to all. These controls give the Federal government too much power over individuals and may be misused to further social reform. They should be continued only where necessary to prevent inflation and must be discontinued as soon as the war is over and the nation's facilities converted to civilian production.

*A stabilized price level* is needed badly to prevent the ruinous price fluctuations experienced over the last 100 years. Agricultural prices fluctuate more violently than does the general price level. How to secure a stabilized price level is a very complicated and controversial subject, even among monetary authorities. The recommendation has been made that Congress establish a bi-partisan national

monetary authority charged with the stabilization of such price levels as selected by Congress.

*Federal taxes and expenses* have been increased sharply to meet war costs. Taxes are burdensome and will tend to restrict business development in the post-war period. We feel that it will be better to have taxes too low than too high in the reconstruction period. We urge our national organizations to study the national fiscal plan and the tax structure. We endorse economy in government and a tax program that will encourage private enterprise.

*Labor trade barriers* in industry and agriculture restrict the free flow of goods and services. The Department of Justice should have authority to investigate the restrictive practices of organized labor and should make public such malpractices as restricting the output per worker. The farmer should be allowed to conduct his own business of producing and marketing his products without interference from organized labor. Such practices as requiring farmers to hire special union drivers to move their trucks into markets or preventing farmers from unloading their products should be prohibited.

## Social Security

The proposal to include farmers and farm laborers in the Social Security program of old age insurance presents a question for farm organizations and their members. At present, farm workers (domestic workers and self-employed) are exempt through the efforts of farm organizations.

The problems incident to collection of the 1% tax on employer and the 1% tax on employee for wages paid have been helpful in maintaining this exemption. These problems have been worked out and a plan to use stamps for farm laborers and income tax for the self-employed to pay total tax of 2% have been developed. With these objections minimized and both political parties including old age insurance for all workers in their platforms, the movement has gained considerable strength.

Workers returning to agriculture from war plants where they have learned of the benefits and made payments toward old age insurance will want to continue this program. There will be pressure to include farmers and farm labor. This question deserves careful consideration by farmers and farm leaders, so that they may make the decision best for agriculture in future years.

## National Agricultural Program

The Agricultural Adjustment program should be put on the shelf now, but held ready as a safeguard against low prices in the post-war period. Research for new uses of farm products should be continued and stressed. The provisions for crop adjustment, crop loans and an improved plan for surplus disposal may be necessary in the future to give farmers an opportunity to stabilize their prices through cooperative effort with the government. Administration of the plan must be broken down into state units to give it the needed flexibility. Authority to make decisions should be in the state. The director of Extension in each state should make the nominations of members of the state board to be selected by the national board. County units should operate out of the county agent's office. This would avoid duplication of effort, eliminate waste, and build a unified, efficient program. State boards should have the entire responsibility of carrying on the work now carried

on by the AAA committees, the Soil Conservation Service, crop insurance, and farm and home activities of the Farm Security Administration. Similar arrangements should be made in the counties. This plan will save money and time, and prevent waste. It unifies the farm program, decentralizes authority, and emphasizes democracy.

### Decentralization of Government

The deplorable trend to centralize all power in Washington was stimulated by the war. A continuance of it will undermine democracy and lead to dictatorship.

The only way to reverse this trend is to increase the ability of local governments to assume greater responsibility in the solution of local problems. Farmers can help by encouraging better local government. They should insist that Federal programs be decentralized. Local people should be encouraged to take part in the planning and operation of these programs.

Democracy's strength is in the composite judgment of the people on the problems as they arise. We must develop democracy by practicing its principles, as we are going to need its full strength in the rebuilding of our national economy to provide equal opportunity to all.

R. C. F. WEAGLY, *Chairman*
E. I. OSWALD, *Secretary*
C. E. WISE, JR.
T. ROY BROOKES
MRS. R. C. F. WEAGLY
GEORGE SACHSE
MRS. W. ATLEE ARMOUR
B. B. DERRICK
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DAN THOMAS
G. C. BROWN
O. H. HOFFMAN

## FEDERAL-STATE RELATIONS

It is highly important in the post-war period that Federal-State relations in all fields of agricultural education and production, including so-called action and service programs, be restored to the original basis of independence and cooperation between the state and state institutions with the Federal Departments, rather than dictation by the Federal Departments.

In Federal-State relations in agriculture, we are naturally concerned with the organization of the U. S. Department of Agriculture, for our primary relationships will be with this Federal agency. Due to the war, many reorganizations in the Department of Agriculture have been authorized and the original set-up for cooperation with the State has been largely eliminated. The requirements of the war in setting up the War Food Administration merged all offices, bureaus and divisions that had a bearing on food production.

The farmers and farm leaders of Maryland express the hope that with the advent of peace the U. S. Department will be aligned upon a stable basis of distinct bureaus with proper prestige, under the Secretary's direction, and that the previous arrangement for cooperation of the respective bureaus with the states in various lines of activity, such as Extension and Experiment Station, will be properly reestablished. The U. S. Department of Agriculture, over the years, built the reputation of being the last word as a research institution. It also developed the field of regulations for disease control and inspections of various types. It worked with

the states through the Land-Grant institutions. We believe that this policy should be reestablished in the interest of the Department, as well as the interest of the State and State institutions and the people whom these agencies are created to serve.

We suggest the following recommendations as a guide in reorganizing in the post-war period the respective lines of work by Federal agencies now operating in the State:

1. **Cooperative Extension Work**—The original concept of the Smith-Lever Act and the setting up of the Extension Service work upon a Federal, State and County cooperative basis is ideal. This program worked cooperatively with the Federal Departments successfully for more than 30 years, and its continuance upon this basis is essential to the well-being of the work and our rural people.

2. **Agricultural Adjustment Agency**—No one can prophesy the future of this Federal agency—its continuance during the war period would indicate its maintenance in the post-war period to meet any drastic requirements in production. The work of this agency was first inaugurated to meet an emergency through cooperation with the State authorities. The program was accepted by our Land-Grant College, the University of Maryland, through its Extension Service, and all of its forces were directed to carry out the program. By this means, it was successful and it was acknowledged by high Federal officials that only by utilizing the State's resources and cooperation of all forces was the result attained possible. Later, this agency became more and more Federalized and separated from State authority by orders from Washington. Offices and personnel in the State and counties were separated and more and more it has become a wholly Federal agency, ignoring the rights of states and state institutions. A thorough understanding should be arrived at regarding the place such an agency, if continued, should occupy in Federal-State relations in the post-war period.

3. **Farm Security Administration**—This Federal agency continues to operate in the State. It maintains a large corps of workers with independent offices in various rural areas. There is little attempt at coordination with State authorities and, while cooperative relations exist, it is a distinctly Federal agency with little or no state influence or control.

The land tenancy program conducted by this agency has been and will continue to be a constructive program in the interest of farm ownership and the subsequent reduction of tenancy. This phase of the Farm Security program should be conducted in close association with state authorities, as was the case when the program was inaugurated. In recent years, no attempt has been made by this agency to consult with or to be guided by state authorities in the conduct of this or other phases of the program. Recently, an annual and semi-annual meeting of the reorganized state committee was held. Reports of officers were submitted, but policy, budget matters and personnel, offices and future program were not matters for the State Committee to determine.

The future Federal-State relations of this agency, if continued in post-war, should be developed as recommended for others in the field of agriculture. There should be an organic basis of cooperation between Federal and State agencies, either through the Land-Grant College or by properly organized committee with powers to direct the work cooperatively.

4. **U. S. Soil Conservation Service**—This Federal agency is working in close cooperation with state authorities. It represents typically the possibilities of close cooperation between Federal and State agencies; the splendid results obtained and the degree of interest and cooperation between all employees is a striking demonstration of mutual confidence and appreciation. Yet, even in this case, there could be a more organic recognition of cooperative direction of this work in a set-up similar to the cooperative extension work. State authorities have little or no direction of the budget or employees of the U. S. Service in the state. Fortunately, the attitude of the U. S. Soil Conservation Service is to adhere to state policies and work in close cooperation with state authorities. The tremendous need for further development of soil conservation in the post-war period would suggest an organic relationship that would not simply depend upon personal attitude of the employees, either state or Federal.

Work has been done for many years by the U.S. Department of Agriculture and by the State Extension Services and Agricultural Experiment Stations in the field of irrigation, drainage, erosion control, flood control, and stream bank protection. However, until quite recently, this work has been inadequately supported, limited in scope and not too well coordinated.

About 10 years ago, under the dynamic leadership of Dr. H. H. Bennett, the problem of soil erosion was dramatically brought to the attention of the American public. The Soil Conservation Service was organized within the U. S. Department of Agriculture and, with increased appropriations, launched an aggressive campaign to check the ravages of soil erosion. Later, water relationship was included by the formation of a water planning division within the Soil Conservation Service.

It may be questioned whether the name of the Soil Conservation Service adequately covers, or in the public mind accurately defines, the scope of its functions. The word "conservation" is used by a multiplicity of agencies, organizations and movements to justify and popularize their aims and objects. Also, the publicity given to soil erosion tends very generally to obscure the fact that this in only one phase of the functions of the Soil Conservation Service. Even the phrase "soil and water conservation program" is not broad enough to cover the entire field.

It is suggested that a name might be found for this agency, and its program, which would remove some of this ambiguity and misunderstanding.

Another field for speculation is found in the relationship between the U. S. Soil Conservation Service, the Land-Grant Institutions, and the individual farmers. State laws have been passed creating Soil Conservation Districts and splendid progress has been made in this state by the creation of 16 districts during the last five years.

However, it is the belief of this committee that a similar plan of cooperation in this work should be developed, as illustrated by the Extension and Vocational Educational Systems, whereby organic cooperation through the Land-Grant College, the University of Maryland, is provided to insure continuity and coordination with state policy in the vital post-war development.

5. **U. S. Employment Service**—With the development of an acute manpower situation resulting from war conditions, the State Employment Services were taken over by the Federal Manpower Commission. In the post-war period, these

should be returned to the state authorities, or a cooperative basis should be worked out wherein joint control and direction should be initiated to render greatest service in this field.

Some constructive disposition will have to be made of the farm labor program in the post-war period. This was delegated to the Extension Service by Congress temporarily in a critical period when no other agency could take it. Obviously, it is not an Extension function and with two years' experience it is believed that Extension will be glad to be relieved of this burden. However, no one can foresee the farm labor problems of the future and this work, or some phases of it, should be placed in sympathetic hands. If it is returned to the Employment Service in the interest of economy, care should be exercised that the personnel in rural offices are as sympathetic with agriculture and agricultural demands as with industry. It is the judgment of the committee that demands in farm labor will gradually decrease in the post-war period, but there will always be calls for extra labor in many of our critical areas.

6. **Other Agencies**—The same principle should guide the work of other agencies in the U. S. Department of Agriculture and other departments of Government, such as marketing, price adjustments, inspection work, etc.

The above are simple illustrations of the encroachment of the Federal Government in managing programs of vital concern to the people with little or no recognition of state rights or attempt at cooperative relationships with state authorities or agencies.

To preserve our democracy in the post-war period, every precaution should be exercised to insure local autonomy and the right of the people to have some say in the conduct of programs that affect them most intimately. Only by such means can we prevent duplication and needless expenditures of public monies.

This report is submitted with full appreciation of the necessity for Federal action during a war period. It recognizes the desire of Federal officials to render the greatest service within their jurisdiction, but it maintains the thesis that in the post-war period we should return to cooperative relations with states and state institutions and the people to insure greatest returns and satisfaction to all concerned.

T. Roy Brookes, *Chairman*
T. B. Symons, *Secretary*
A. R. Marvel
John Clark
H. J. Patterson
P. C. Turner
R. C. F. Weagly

## MARKETING FARM PRODUCTS

Marketing of farm products is a broad field and, in general, covers all functions from the time the product leaves the producer until it is received by the consumer. The primary objective in post-war years will be to give consumers a better product at reasonable cost, and provide the producer a fair return.

The pattern for improving our marketing system should include:

1. **Improved Quality and Standardization**—Possibly no greater cause of confusion and speculative activity in marketing farm products exists than is presented by the large volume of unstandardized products offered on the market.

Growers must give more attention to producing a better product. With reduced demand, closer grading will be a necessity; therefore, observance of recommendations of the production reports on post-war planning will result in improved products for marketing.

2. **More Attractive Package**—Farm products must be attractive to the eye. The package should be neat, attractive, and convenient for use in the trade.

3. **Standardization of Containers**—Much progress has been made during the war in simplifying containers. This has resulted in eliminating a vast number of odd size packages and has brought about a reduction in the permitted number to a practical minimum.

Discontinuance of the pint bottle for retail milk trade has reduced materially unnecessary travel.

In the post-war period the number and sizes of containers should be kept at a minimum.

4. **Reduced Cost of Distribution**—Attention should be given to shortening the channels of distribution and carrying the products nearer to the consumer. The wide spread in price between the producer and consumer must be narrowed.

5. **Development of Country Point Assembly Markets**—Assembling of farm products as now practiced is extremely inefficient. Development of cooperative truck facilities, expansion in shipping point inspection, and increased use of local auctions are urged.

6. **Improvement of Terminal Marketing Facilities**—To reduce marketing costs, the anticipated market facilities in Baltimore should be improved. The markets are not coordinated, are congested, facilities are poor, and few are equipped to handle the increased volume of truck receipts. Excess handling and delivery costs for fruits and vegetables alone in Baltimore amount to $1,000,000 annually.

Plans are being made to rebuild and improve the terminal facilities in Baltimore in the post-war period.

7. **Development of Processing Plants**—Pressure of wartime activity has developed a tremendous need for processing and storage facilities. Not all of these requirements have been met because of a shortage of essential materials and manpower. Development of quick-freezing and freezer-locker plants are expected when materials and labor are available.

Competition will force canning house operators to improve their products and continue many of the economy practices instituted during the war.

8. **Expansion of Foreign Trade**—Foreign trade must be reestablished as a post-war measure. Foreign markets will need large quantities of agricultural products, and arrangements must be made to have available the desired quantity and quality.

9. **Promotion of Cooperative Organizations Among Farmers**—Farm cooperatives are instruments for the perfection of the free, self-help enterprise tradition on which the true American economy is founded. These cooperative organizations must be expanded in the post-war period.

In general, there is a growing demand in Maryland for more cooperation in every stage of marketing, including assembling, grading, packing, storing, shipping, processing, financing, and merchandising of farm products. The most urgent needs will be for cooperative dressing plants for poultry, and auctions for sale of

poultry, eggs, livestock, fruits, vegetables and tobacco. More cooperation is certain to develop in the farm supply business and farm service cooperatives for electric power, truck transportation, and in soil conservation are expected.

10. **Expansion of Market News Service**—Much progress has been made in market news reporting in Maryland. This service should be expanded so that producers can be informed of market conditions as related to their respective products. This service, when properly conceived, should function to benefit producers, distributors, and consumers.

Adequate information on market conditions is important in times when demand for a commodity must be stimulated.

S. H. DeVAULT, *Chairman*
ARTHUR B. HAMILTON, *Secretary*
RUSSELL C. HAWES

## CONSERVATION

Conservation of soil and water is a very important phase of the food production program. The topsoil that has been saved and the rain water that has been stored in the ground by intelligent and coordinated efforts of agricultural people during the last few years has been an important factor in enabling farmers to meet the increased demands that war has placed upon them.

A great job has been done in soil and water conservation. We do not want this to stop, or even let up, after the war. Excellent opportunities will exist for increasing the effectiveness of the conservation program. A large number of skilled workers will return from the armed services. Quantities of machinery will undoubtedly be available, and there will be a desire on the part of the returning men to build and not destroy; to create and not to break down. They will want to build up the land they have fought to protect, so that abundant crops can continue to grow and there can be adequate forests and clean, inviting streams, rather than what they have seen in some of the foreign lands—denuded crop areas, waste lands, flooded and muddy streams, and silted-up reservoirs.

**Estimated Needs**—The approximate amount of conservation work needed to preserve Maryland soils, protect crops and forests, and obtain efficient use of our available water supply have been estimated by soil scientists of the U. S. Soil Conservation Service in cooperation with the University of Maryland. The list follows:

| | |
|---|---|
| Contour cultivation | 800,000 acres |
| Contour strip cropping | 700,000 acres |
| Terrace systems | 35,000 acres |
| Diversion ditches | 3,500 miles |
| Constructed farm water courses | 2,200 acres |
| Outlet drainage ditches | 550 miles |
| Individual farm drains | 600,000 acres |
| Farm ponds | 200 |
| Permanent structures | 8,000 |
| Permanent fencing | 15,000 miles |
| Pasture land improvement | 600,000 acres |
| Woodland management | 1,000,000 acres |
| Planting of forest areas | 135,000 acres |
| Management of odd areas (wildlife developments) | 30,000 acres |

Other conservation needs, such as shore erosion, flood control, and erosion control and drainage along highways.

This is a big order, but we believe our land is worth the effort. To accomplish this job, all of the individuals, groups and agencies will have to work together whole-heartedly in a coordinated and comprehensive program of wise use of each acre of land. It is recognized that this problem is more than just the concern of the individual land owner. Governmental agencies, County, State and Federal, have a direct interest and responsibility to maintain the productivity of the land and to promote the general welfare of the poeple. In several instances, the counties have contributed materially, especially in the drainage phase of the work. The State appropriation, although small, is increasing from year to year, and is filling a very definite need. Several State officials, particularly the members of the State Committee, devote considerable time to this work. The Federal appropriation is largest of the three at this time, although it is hoped that an equal County, State and Federal participation will be attained at a future date.

**Education**—It is recognized that education is most important in conservation, and that a continued effort on the part of all groups and agencies is necessary to accomplish the obective of "wise use of our natural resources."

In cooperation with the Extension Service, the educational program should be expanded along present lines. Newspaper articles, radio releases, exhibits, motion pictures, bulletins, leaflets, and posters should be used extensively. Demonstration tours should be held when tires and gasoline become more plentiful.

Schools should be encouraged to include a conservation course in the curriculum.

Motion pictures should be used extensively at local meetings and in commercial theatres.

Each District should have at least one large tour every year. There should also be each year a state-wide tour centered around the city of Baltimore and sponsored by the State Soil Conservation Committee. Local tours in small groups should be encouraged also.

Each radio station in the State should have something on conservation at least once a week.

All fairs should have exhibits on conservation.

A state-wide bulletin should be continued to be published by the State Soil Conservation Committee, in cooperation with the Extension Service. Leaflets and circular letters dealing with local conservation practices should be issued by the Districts in cooperation with the County Agent.

Private industrial establishments and commercial houses should be acquainted with conservation and their support solicited.

Women's organizations should be encouraged to make conservation of natural resources a part of their programs.

**Conservation Districts**—The Soil Conservation Districts organized under the State Enabling Act passed in 1937, and operating under guidance of the State Soil Conservation Committee, are in excellent position to carry out this conservation program.

Since the law was passed, 17 districts have been organized and two more are in process of being formed. When these are completed, 18 of the 23 counties will be covered by soil conservation districts. Conservation plans have been completed

on more than 3,000 farms. Erosion control measures, such as contour cultivation and strip cropping, have been established on 150,000 acres. Plans for improving forest and wildlife have been made on 20,000 acres. Timber conservation plans for an additional 16,000 acres have been completed for private land owners by the Maryland Department of State Forests and Parks. Drainage ditches have been dug that will improve 400,000 acres of wet land. Surveys have been made on 2,000,000 acres which show an inventory of land uses, types of soil, degree of slope, amount of erosion, need for drainage, and other physical factors.

The conservation work that has been done represents only a small part of the total need. However, with all groups and agencies cooperating under the guidance of the State Soil Conservation Committee (operating through the State Board of Agriculture), it is believed that great strides can be made in the future in conserving and making best use of our natural resources.

WALTER E. BURALL, *Chairman*
HARRY H. RIECK, *Vice Chairman*
EDWARD M. DAVIS, *Secretary*
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## FARM CROPS

(A separate report is presented for tobacco)

With very minor exceptions, general farm crops in Maryland are used for feeding farm animals. Therefore, the program of crop production must be associated closely with the program of production of livestock and livestock products.

When price relationships are normal, an economical agricultural program requires that the farms of Maryland produce most of the feed and all of the bedding used by their livestock populations without sacrifice of the crop producing capacity of their soils.

### Crop Adjustments

Regular crop rotations or systematic successions of different types of crop plants are practiced on most farms throughout the livestock areas. While changes in these rotations may be desirable at times to keep pace with changes in general agricultural conditions, yet the frequent sudden shifts that have been enforced by crop adjustment agencies in recent years should be avoided if the essentials of good crop rotations are to be retained.

These essentials include:

1. A balanced production of crops required for the agricultural enterprises of the particular farm.
2. A uniform distribution of labor.
3. A reasonably continuous ground cover to check erosion.
4. Legumes at intervals frequent enough to maintain nitrogen supply.
5. Replenishment of soil organic matter.
6. Control of weeds, insects, and diseases.
7. Spread of crop risks due to weather.

In these rotations, practically all cultivated crops or summer annuals are followed by fall-seeded small grains which provide winter cover. Grass and legumes

are seeded in the small grains and are used either for hay or pasture through one or more years. To maintain these rotations, reasonably fixed relationships must prevail among the acreages devoted to cultivated crops, small grains, and hay or pasture. Either these rotations must be revamped completely for each farm with appropriate changes in the field layouts, or changes in crop acreages are likely to result in idle land, bare land over winter with consequent erosion and reduced production. Therefore, if in the post-war period crop adjustments again should be desirable, the individual farmer should be allowed greater freedom in the method of adjusting his particular farm than prevailed in the pre-war adjustment era.

Freedom of choice among the small grains, as well as other crops, is desirable. Barley is one of the heaviest yielding small grains on highly fertile, well-drained, well-limed, loamy land, if it can be seeded early. The acreage where these conditions prevail is restricted. A reduced labor supply, or a week of wet weather which delays seeding, may make barley an unwise choice on land to which otherwise it is well adapted.

Wheat produces more total digestible nutrients per acre than any other small grain throughout much of the state. Rye is preferred for very late planting or on very light or sandy soil. Typically, spring oats produces low yields of digestible nutrients per acre except at high elevations. Where it is used, the land is left bare over winter. Therefore, its extensive use on most farms is restricted to areas where conditions such as labor shortage prevent planting a fall-seeded grain.

Outside pressure to influence choice among these small grains almost inevitably results in reduced production. Only the farmer himself, who is familiar with his soil and labor conditions, can make a wise choice.

To meet post-war competition, not only must the feed supplies be produced locally, but the cheapest nutrients must be used most abundantly. On lands well adapted to perennial grasses and legumes, pastures produce nutrients more economically than they can be obtained from harvested crops. No one species of pasture plant will provide abundant, palatable and nutritious pasture throughout the growing season. Therefore, a judicious selection of pasture plants must be chosen for most economical and continuous pasturage.

### Fertilizer Usage

Most economical increases in crop production during the war period have resulted from greater use of commercial fertilizers. Today the value of increased crop production is much greater than cost of the fertilizer responsible for it. A very marked change in comparative values of fertilizer and crops must take place before this increased use will be unprofitable. It seems apparent that such use should continue in the post-war period until the state is producing as much livestock feed as it consumes.

### Lime Usage

When all forms of lime are converted to ground limestone equivalent, the use in Maryland shows an increase of nearly 50 percent in two years. Much further increase is necessary before the state is using enough to bring about the most economical agricultural production. The greatest need for lime is found in those areas farthest from sources of supply, where the cost of delivery is high. Full use of lime cannot be expected in such areas unless or until delivery costs can

be reduced. Important areas that are subjected to these difficulties of delivery are located in Southern Maryland and on the Eastern Shore, far from quarries and from railroads.

Many types of landing craft have been designed and built for military use during the war period. A study should be made of the feasibility of making deliveries of lime throughout tidewater Maryland which such craft. Water transportation is very economical. On the other hand, the construction and maintenance of landing facilities has been expensive. If such landing facilities can be dispensed with in large measure, it should be possible to cut the cost of lime delivered on farms to a figure at which large increase in use would result.

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## TOBACCO

It is estimated that within the next five years Maryland tobacco will be at least 20 percent below the market requirements.

The major problems or factors responsible for this situation are apparently due to a number of complex conditions:

1. Income received by growers for their tobacco after deduction of expenses has not been sufficient to induce material expansion in production.
2. The tenure relationship between landlords and tenants is not conducive to significant increase in production.
3. Land owners of large farms and estates which are not producing to capacity are not willing to sell land at any price. Those willing to sell demand prices that are out of line with production capabilities.
4. Many skills are required to produce a crop of tobacco, and these skills must be learned within the area of production.

The desirable objectives would be a readjustment of items 1, 2, 3, and 4 which would bring into production thousands of acres that are now practically out of cultivation. At present, the Maryland annual tobacco acreage is about 39,500 acres. Within a few years it should be approximately 47,500 acres, or an increase of 8,000 acres.

### Labor and Equipment Needed

The amount of labor and equipment needed for an expansion of 8,000 acres depends upon two methods of approach:

First, by the individual unit of 7 acres per man.

Second, by the multiple unit of adding to existing units of production.

A unit of production of 7 acres of tobacco includes the necessary livestock, food and feed crops to constitute a balanced and economical farming enterprise. By either method of approach, it is estimated that about 1,150 additional men and a like number of tobacco barns will be required. In addition, hundreds of transplanters, plows, tractors, harrows, fertilizer distributors, work stock, hand tools and other miscellaneous equipment and supplies too numerous to list will be required.

**Recommendations**

In connection with the distribution of military materials and further development of the Maryland tobacco industry, the following recommendations are made:

1. That military materials be distributed preferably by local cooperatives, or by authorized dealers. In either case, handling charges should be controlled by a public agency.

2. That the State should own a tobacco experiment station, fully equipped to study new problems in production and marketing, placing special emphasis on reduction of the enormous amount of man labor required to produce a crop. Such study should include development of new machinery that would replace much of the man labor and horse work now required in production practices.

3. That the tobacco growers maintain an effective organization, sufficient in size and scope to cope with county, state and national problems affecting tobacco farming. No other organizations could be more efficient than tobacco growers themselves in the production and marketing of a crop, and in the purchasing and distribution of agricultural supplies among themselves.

In any event, it should be remembered that whether the present acreage will be maintained, decreased, or increased depends upon the net income received by growers for their tobacco.

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## DAIRY

### Summary

The aim of post-war planning for dairying in Maryland should be to make efficient operations profitable. Producers, processors, and distributors or handlers cannot stay in business without making a profit. On the other hand, after the war, consumers will not be able or willing or pay for inefficient operations.

The war has created an unexcelled demand for dairy products. That demand has caused the industry to expand to an all-time high, and the trend is still upward. Uses of dairy products have expanded during the war, but because of rationing, food habits with respect to consumption of dairy products have changed. This may mean less consumption after the war.

The outlook for dairying in Maryland in the immediate post-war period (two or three years) is favorable, but eventually a falling off, particularly in prices is in prospect. The seriousness of the slump will be determined to a considerable extent by the effectiveness of controls which the government will undoubtedly impose.

When the demand for dairy products falls off and the inevitable depression gets under way, Maryland dairy enterprises will be forced to give attention to efficiency. In addition to a falling off in demand, they will face competition from lower cost sections of the country and from types of products which the war has helped to develop.

To help solve post-war dairy problems, a five-point program is suggested:

1. Support efforts to prevent inflation, unemployment, and deflation or depression.
2. Put emphasis on more efficient and economical production.
3. Cooperate to encourage greater consumption of milk and milk products.
4. Endeavor to reduce the costs in handling and distribution of fluid milk and in the operation of processing plants.
5. Expand research to broaden present knowledge of dairy products and to develop undiscovered food values.

### Probable Situation at End of War

When hostilities cease, the number of cows in milk in Maryland will likely be at an all-time high. Since the war started, the number has increased from 189,000, the average for the period 1937-41, to 204,000 in 1943. The number is expected to average 208,000 in 1944.

Production of milk increased from a yearly average in the 1937-41 period of 880 million pounds to 984 million pounds in 1942, but dropped to 953 million pounds in 1943. The drop was due to the 1943 drought and a shortage of concentrates, particularly high protein concentrates, on the market. Due to the feed shortage, production in 1944 is not expected to exceed 1943. If 1944 is a normal crop year and feed grains are made available, production will likely go to a record high level in 1945.

The demand for milk in Maryland exceeded the supply during the last half of 1943 and promises to continue strong until demobilization begins. In the lower northeastern states (New York, Pennsylvania, New Jersey, Delaware, and Maryland) the amount of milk marketed in 1943 was 15 percent greater than the average for the 1937-41 period.

The principal reason for the increased demand for milk in Maryland was an increase in population. Between April, 1940, and March, 1943, the civilian population increased 9 percent. The increase was in the urban centers. Farm population decreased 5 percent.

With the progress of the war, prices on all fronts have progressively moved up. Some have increased more than others. The average price paid to farmers in Maryland for milk increased approximately 58 percent from 1939 to 1944, but the cost of feed increased as much and the cost of labor, what there was of it, even more. Milk cow prices doubled from 1935-39 average to 1944. This has helped the dairyman who had cows for sale, but has taken profits out of the business for the dairyman who had to buy.

When hostilities cease, Maryland dairy farms will need many things, such as paint, repairs, and new equipment of all kinds. Labor will be needed also for jobs that have been left undone during the war.

### Probable Changes After the War

Conditions affecting the dairy industry are certain to change at the end of the war. The inevitable depression will get under way. Just how rapid or how serious it will develop remains to be seen. To a considerable extent its seriousness will be determined by whatever regulations, controls, or policies the government may impose. Government policy with respect to (1) price regulation, (2) schemes for

rehabilitation, (3) plans for graded demobilization, and (4) lend-lease to war-torn countries.

Based on anticipated developments, it is fairly safe to predict that during the immediate post-war period (two or three years), the demand for milk production in Maryland will hold up well and the price will remain high. The reasons for this are: (1) government help to liberated countries, (2) industrial activity resulting from the demand for goods people have been unable to buy during the war, and (3) spending of war savings. This is the period when inflation is most likely.

As long as the demand for milk and milk products is good, relatively high prices for cattle, milk and milk products may be expected. Following the immediate post-war period, a drop in demand and prices must be expected. As indicated above, the producing ability on farms will be greater than normal demands. When the drop comes, rapid culling of herds will be necessary. Only efficient producing cows can be expected to pay a profit.

### Trends in Dairying

Post-war planning for dairying in Maryland should take into account national trends in the industry. Except for brief interruptions, the industry has been growing steadily for a period of 34 years. During that time the total milk produced in the United States has increased about 80 percent. The number of cows has increased about one-half as much, or 40 percent. The only significant interruption in the upward trend occurred during World War I. For the duration and for a short time afterward there was a leveling off. There was a slight decline in production in 1934, but this was due to the drought. In 1943, production was less than in 1942, due to a combination of drought and a leveling off on account of the war. The facts indicate that normally production is accelerated in periods of depression and slackens during periods of prosperity. Based on a study of dairying over the last 34 years, it is safe to predict that after the war dairying in the United States will continue on an upward trend.

The war has elevated the importance of milk and milk products to the top among the health-giving foods. In spite of this recognition, food habits of consumers have changed and there is danger of less dairy products being consumed in the future. On account of rationing, butter and cheese particularly have been replaced in the diet. A survey made by the New York Times indicated that the shift from butter to oleomargarine on account of rationing was greater than any other food habit changed. The effects of this change may be realized from the fact that there are only 12 pounds of butter available per person in 1944; compared with the pre-war everage of 17 pounds per capita. The 5-pound drop represents over 6 million pounds of butter, which in terms of milk equivalent means more than 12 billion pounds of milk, or more than 10 percent of the nation's milk supply.

As a result of the war, new products and new uses for products have been developed. Particularly significant has been the development in the dried milk industry. This development may have far-reaching effects on the dairy industry. It opens a way whereby milk produced in surplus areas can be moved to deficient areas. It may mean competition in industrial areas from milk produced in surplus areas.

De-emphasis on the superiority of butter over vegetable oil fats may be a development of major concern. Any reduction in the use of butterfat is bound to be reflected in the manufacturing of other dairy products. Fortunately, the de-emphasis on butterfat is being offset to a considerable extent by a new emphasis on solids not fat in milk. Scientists have proved that the caseine, minerals, and vitamins in milk are important to health.

### Special Reasons for Post-War Planning

Maryland dairymen have special reasons for giving serious thought to post-war planning. They are:

1. To a large extent, dairying constitutes the sole livelihood of a sizable proportion of the population. Many farm families and more than a few city families depend entirely upon incomes from dairying. For most of these people a change to another enterprise could not be made easily. Dairy farming to a large extent is a family affair and any change affects the entire family.
2. A dairy farm, or a milk plant, or any processing plant, represents a large investment. It also represents a permanent or long-time investment which cannot easily be converted. Because of its permanent character, dairying is a stable business and one not quickly developed.
3. Dairy farming is the basis for a large portion of Maryland agriculture. Except in the truck crop areas, the soils are well adapted to production of forage crops and dairy cows convert these crops into human food more efficiently than other animals. To maintain soil fertility and prevent soil erosion, many Maryland farmers must keep a high percentage of their land seeded to grasses. Here again the dairy cow fits into the picture.
4. Milk is the most important item of food in the human diet and to a large extent Maryland producers are responsible for the supply of milk needed in the area. Maryland dairymen are in a protected milk shed area and can look forward to a steady demand.

## A SUGGESTED POST-WAR PROGRAM

### Support Efforts to Prevent Inflation, Unemployment, and Deflation or Depression

The sequence of events which brings depressions could be controlled. Dairymen should support every effort to accomplish this because no agricultural industry is more dependent upon consumer purchasing power than dairying. In periods of depression, consumption falls off some, but prices fall in direct proportion to factory payrolls.

### Put Emphasis on More Efficient and Economical Production

Production of the average cow in Maryland is less than 5,000 pounds of milk. After the war, this will be too low to be economical. The low average production in Maryland is due to disease, insufficient amounts of the right kind of feeds, poor management, and the use of inferior breeding stock. In their efforts to obtain efficient and economical production, dairymen should:

a. Keep cattle healthy by eliminating important diseases. Mastitis is the number one disease in Maryland.
b. Grow and feed abundant quantities of high quality forage crops. Pasture should be fertilized and tended the same as other crops.

c. Improve the productive capacity of cows through better sires. Cooperative breeding associations and artificial insemination.
d. Improve herd management. Regularity in feeding and milking, rapid milking, dry periods for cows, and dry, comfortable quarters are the important considerations.
e. Keep production records as a guide for feeding, breeding and culling.

**Cooperate to Encourage Greater Consumption of Milk and Milk Products**

The per capita consumption of milk in the United States has never exceeded one pint a day. Medical authorities agree that it should be twice that much. Canadians eat twice as much butter and Danes twice as much cheese as we do.

Two programs for increasing consumption are recommended:

a. *Nutrition Education*—The National Dairy Council has done much through nutrition education to increase consumption of dairy products. This work is being done through schools, doctors, dentists, nurses, and various organizations. A survey showed that in 1941 the cities which used National Dairy Council material had an increase in consumption of 6.2 percent. Cities of equal size not using the material had an increase of 1.5 percent. In 1942, cities maintaining active Dairy Council units had an increase of 10.9 percent, and cities without such units had an increase of only 5.3 percent.

b. *Advertising*—The American Dairy Association is organized to do effective work through advertising. The fundamental points which are being stressed are: (1) Conduct scientific research to find facts to help sell profitably more milk and milk products, benefiting producers, the industry as a whole, and the health of the nation; (2) conduct scientific research to find new uses for milk and other dairy products; (3) conduct packaging, advertising, merchandising and market research; (4) wage a broad, flexible advertising program to help the buying public understand the great values it gets in milk and milk products—both as to prices and nutritional values.

*Endeavor to Reduce the Costs in Handling and Distribution of Fluid Milk and in the Operation of Processing Plants*

Many economies in milk distribution have been instituted by distributors since the war started. Elimination of special deliveries, every-other-day, or the 6-day per week delivery, closer check on bottles, cases and containers all have tended to reduce costs. Other savings would be effected by:

a. More cooperation between truckers who collect milk.
b. Reducing the allowance for hauling.
c. Improvement in packaging.

*Expand Research to Broaden Present Knowledge of Dairy Products and Develop Undiscovered Food Values*

Scientists have contributed much to the development of the dairy industry. A great deal remains to be done.

a. Milk contains unidentified food values.
b. The functions of fatty acids are not fully understood.

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## THE LIVESTOCK INDUSTRY

### Desirable Objectives

There is urgent need among all classes of farm livestock to improve the individual and average productive capacity of herds and flocks, and to raise their breeding efficiency. In the difficult times ahead only animals which are efficient producers and regular breeders will be profitable. Maryland livestock producers, therefore, should keep:

1. Such records as are necessary to establish the productive efficiency of their animals, thus making possible intelligent selection and culling.
2. Such breeding data as are required to establish breeding performance.

Every possible precaution should be taken to prevent and control the diseases and parasites that prevent conception, result in abortion, or in high death rates, or lower efficiency by sapping the energy of livestock.

More care, attention and intelligence must be exercised in feeding livestock in order that they may produce more abundantly, with greater efficiency, and yield a profit under the rigid competition to which they will be subjected. This will mean feeding animals in accordance with their performance and demands. Crops and feed materials which yield the largest amount of nutrients per acre at the lowest cost of production, or which, if purchased, supply nutrients at the lowest cost per unit, should be utilized to the fullest extent. Fullest use should be made of permanent and temporary pasture, of high quality hay and other roughage, and of home-grown grains. The kind and amount of home-grown feed available on individual farms should, in most cases, be the major factor in determining the kind of livestock kept and in limiting the size of the livestock unit maintained.

### Measures That Will Aid in Solving Some of the Problems of the Industry

1. Research in the fields of animal genetics, breeding, nutrition, and disease and parasite control should be carried on more extensively by State Agricultural Experiment Stations, by Federal Research Agencies, by endowed and privately controlled research laboratories.

2. Both technical and popular publication should be made of the facts obtained through research. By and through the State Experiment Station and State Extension Service results of research should be made more extensively available in understandable and practical form to the farmers of the State.

3. There are now too many Federal bureaus and agencies, with overlapping functions and duplication of man-power, concerned with promoting the "welfare" of the farmer. Many of these agencies can be eliminated and the functions which they perform can be more effectively administered by the respective State Agricultural Experiment Stations and Extension Services at a great saving in cost.

4. Livestock, livestock products, and feed for livestock should be allowed to move in the normal channels of trade in response to demand and supply, rather than interfere with such movements by artificially established price "floors" and "ceilings."

5. There is need for more and stronger farmer-owned and controlled cooperatives, whose functions shall be the purchase and sale of livestock and livestock products, farm equipment, supplies, etc.

6. Closer cooperation should be established between the research, educational, and extension facilities of state institutions and the farm cooperative organizations, livestock breed associations, and organizations established for the purchase, sale and slaughter of livestock, and for the processing and distribution of livestock products, such as meat and wool.

**Labor, Equipment and Materials Needed**

Maryland farms are now short of labor, machinery is becoming worn out, many buildings are in need of repair, fences need to be repaired and new fences constructed, farm trucks and tractors are in need of repair and replacement, and both horse and mechanical power need to be augmented. As to what and how much materials and labor are required in the State, the Departments of Agricultural Engineering and Economics are better qualified to speak.

## BEEF CATTLE

The following suggestions are advanced as fundamental elements in the structure of a plan to further the economic interests of the beef cattle industry in Maryland after the war. There will always be variations in the opinions of cattle men as to the so-called "best practice." The factors touched upon are advanced as a summary for cattle men, particularly the inexperienced, for they deal with facts which are basic in the cattle industry, and apply to both commercial and purebred herds.

No effort has been made to consider factors dealing with the raising of fancy purebred cattle for the higher priced markets. The same economic principles will be applicable.

Figures show that beef consumption in Maryland is probably 60 percent more than local production. This would indicate that there will be no need to reduce the number of Maryland beef cattle, but rather that they could be increased slightly.

No recommendation is made as to the minimum size beef cattle herd which can be operated at a profit in Maryland. Opinions vary considerably and the figures for a minimum herd extend from 25 to 40 head. It seems reasonable to expect that the balance between total costs and the value of calf production will differ with the size of the operation, and, therefore, each farm must be considered in the light of its individual relation to th general problem. However, the following major factors are recommended for immediate consideration:

1. The size of the herd should be adjusted t the economical carrying capacity of the farm acreage. Concentrate on the low cost feeding schedules using home-grown feeds and roughage. The size of herd should be in proportion to available pasture, so that over-grazing and loss of weight in the cattle will not result.

2. Improve pasture lands to maximum carrying capacity and institute a crop rotation which will yield the most desirable roughages and grains for winter feeding. Since pasturage is the cheapest feed, it should be utilized to the utmost.

3. Provide inexpensive, but adequate, winter quarters for breeding cows and bulls. Separate young females from older animals or provide separate feeding pens for the former. Make use of silage as the basic ration for winter feeding of brood cows, with only enough supplementary feed to carry them through in good

condition. Use of calf creeps is by all means an essential for giving the young animals a quick start.

**Herd Management**

1. All beef cattle herds should be culled of non-producing females as one of the first steps in reducing cost of production. Replace these females with guaranteed breeders of the best type.
2. Use only the very best herd sires in both purebred and commercial herds. The cheapest method to improve commercial herds is by use of good purebred bulls.
3. The majority of the male calves from purebred herds should be diverted to the steer market. Too many medium quality bulls are now raised, whereas they would have made choice steers in most cases. The offspring from mediocre bulls reacts to the disadvantage of the breed.
4. Educational work should be done to establish most porfitable beef types. A beef type should be acceptable in the show ring and should give efficient production of beef in the feed lot.
5. Improve the calving records of all herds so that production levels will not fall below 90 percent. Stress the importance of sanitation in care of the herd.
6. Educate the breeder to keep proper cost records. A simple system is all that is necessary for him to arrive at the cost of his calves.
7. Educate breeders in the proper method of fitting steers for market. Emphasize the advertising value of the show ring for fat cattle, such as the Baltimore Livestock Show.
8. Encourage breeders to operate their production for the local market, and to control their costs accordingly.
9. It is probable that there will be only a light European demand for purebred beef cattle, for several years after the war and not in sufficient proportions to justify any great effort by Maryland breeders to cater to that market.
10. The commercial cattle enterprise is the backbone of the beef cattle industry in Maryland. Conditions are favorable for a sound commercial cattle business in the State.

## HORSES AND MULES

Breeders of draft horses and mules in Maryland can be divided into three classes:

A. Those producing foals merely for the purpose of selling them, either as foals or as a young broken team, the cash derived from the sales being the main cash income from that farm or business.
B. Those using mares for farm power and producing foals as a by-product and either selling them or using them as replacements on the farm.
C. Breeders of purebred horses.

*Class A*—Those expecting to show a profit from the sale of horses and mules have never been able to operate successfully, and will not be able to do so in the post-war period. Farmers should be discouraged from attempting to "go into the horse and mule raising business," as such a project will surely result in failure.

*Class B.*—Farmers raising foals as a by-product and for replacements are operating on a sound business basis. Investment in brood mares for work and breed-

ing is modest and production and maintenance costs are low. This will be especially true after the war, when feed again becomes plentiful and cheap. Depreciation is slight; where replacements are raised, appreciation is often realized.

*Class C.*—Purebred breeders may operate either under Class A or Class B, with the added advantage of raising purebred foals. They are in a much better position because they are producing better horses at only a slightly higher original investment, no higher maintenance expense, and a larger sale price with greater demand.

Maryland farmers are in good position to produce foals, so far as natural advantages are concerned. Farms are well watered and have some of the best grass lands in the country.

There is a great deal of controversy as to just what the demand for horses and mules will be in the post-war period. It is thought that there will be a vast improvement in mechanical implements, such as tractors, jeeps, pick-up balers, selfpropelled combines. A great many implements will be designed to operate from a power take-off, and hence the necessity of a tractor to pull them. Farmers, hired help and young people just out of school are becoming very mechanically minded and will tend to use tractors instead of horse power. Ex-service men returning to farms will likely want to use mechanical power. With a tractor, the farm family without extra hired help can operate many more acres, and quicker, than by horse power. In spite of this trend, however, it should be remembered that many Maryland farms are too small to allow for efficient use of mechanized equipment. Many of those farms will continue to use horses or mules as a source of power

On the other side of the picture, it is known that the supply of work horses and mules, from weanlings up to five years of age, is far below the number needed to offset deaths occurring annually. Mechanized equipment for farms will not be produced in sufficient quantities while the war lasts to take the place of what wears out. The supply of oil has been greatly reduced and other sources of internal combustion fuel will have to be developed at a higher cost to the ultimate consumer. Industrial wage rates will most likely remain high for some time after the war, making the cost of mechanized equipment higher. It is a known fact that all implements designed to be used with a tractor cost more and have a shorter life than those built for horses.

There is no doubt that equine stocks in Europe are greatly depleted, due to the war. It takes four years from the time a mare is bred until a horse or mule colt is ready for work. It will be necessary, therefore, for the European farmers to import horses to work their farms for the period immediately following the end of war.

At present, even though there are fewer horses and mules in the country than ever before, the price is lower than it has been in many years. The horse and mule business is considered to be about at the bottom and taking all arguments for and against a larger demand after the war, it is logical to assume that the horse and mule breeding business cannot get much worse and that there is a strong possibility it might improve somewhat. A recommendation to Maryland farmers using horses would be to use purebred mares for farm power and raise foals for their own replacements and a small number for sale, considering these sales as a by-product of their farm power. Mule colts bring higher prices than grade horse

colts; to produce them good grade mares should be used. Farmers should remember that it takes four years to produce a working team and look ahead that far as to what their own needs and the demands of others may be.

No advantageously located farmer ever lost money by keeping good mares as part of his farm power, and raising enough foals for replacement needs.

## SHEEP

Although farmers admit that sheep are profitable, the sheep industry of the State has been slowly decreasing for several years. This condition should not exist.

The climate, systems of raising crops, soil, topography and markets are all conducive to profitable sheep raising in Maryland. With proper management, a farmer can improve the productivity and appearance of his farm and have a cash income with a minimum of labor and investment maintaining a flock of good type sheep.

1. **Improvement of Type and Quality of Market Lambs:**—There has never been too many good quality, well finished lambs on the Baltimore market, but there are quite often too many thin, rangy, long-tailed buck lambs. The post-war lamb producer must improve the type of his lambs. This can be done by selecting deep, thick, compact ewe lambs for breeders and breeding them to good, purebred rams.

The quality of the carcass can be improved by castrating the males and docking all the lambs. In addition, the small lambs which are not ready for slaughter will be more attractive to feeders.

2. **Managing Breeding Dates to Avoid the Crowded Market:**—Most Maryland lambs go to market in late summer or early fall. The wise farmer will manage the breeding of his flock and the care and feeding of his lambs to avoid marketing them at that rush time. Many farmers could profit by buying the good quality small lambs during this rush season and finishing them on grain.

3. **Control of Internal Parasites:**—New methods for controlling internal parasites will be the prime factor in causing an increase in sheep production and insuring profits in the post-war period. The comparatively new phenothiazine-salt treatment is proving a great aid on controlling internal parasites.

4. **More Rigid Enforcement of the Dog Laws:**—Sheep producers of Maryland are unfortunate in being near to or in thickly populated areas. This makes the dog problem more acute. Farmers must insist on new and more rigidly enforced dog laws to protect their property from stray, unchained dogs.

## PORK PRODUCTION

Baltimore packers process many more hogs than are raised in this territory. The extent to which Maryland producers share in the production of pork in the post-war period will depend upon their ability to compete with other pork producers of the nation.

There are hundreds of acres of land in Maryland which, with proper management, can grow yields of corn, clover and alfalfa comparable with the best production in the cornbelt. This land, in most instances, is lower in price than cornbelt farm land. Hogs can be grown at very low cost if clover and alfalfa pastures are used, proper sanitation methods followed, right type of hogs selected and cared

for by sound management. Profits from beef and dairy cattle may well be increased by supplementing with pork production.

**Type:**—The profitable post-war hog must be meaty and have feeding quality. Animal fats after the war will be very low in value and of little demand, so that a hog should have no wastiness nor surplus lard. Hogs of the right type that will weight 200 pounds the quickest will prove most profitable. They can be bred to reach that weight at five to six months of age.

**Management:**—Profitable post-war management will require sound, sensible practices, none of which is more important than sanitation. This is essential for prevention of worms, lice, mange, cholera, bangs, swine flu, etc. Farrowing a clean sow in a clean pen or yard and keeping the pigs on clean ground until they are at least four months old is the first essential step. By clean ground is meant ground on which no hogs have been for at least three years.

Elaborate, expensive housing is not needed, but a dry shelter with sufficient room to prevent crowding is vital. Electric brooders, which can be home-made will save almost 100 percent of the pig crop. Dry bedding should always be provided. A frequent spraying with oil will prevent lice and mange. Pigs should be double treated for cholera just prior to weaning, and the breeding sows and boars should be blood-tested and kept bangs free.

Packers penalize hogs raised in sties, so common in many sections of Maryland, and they should be abandoned for portable houses that can be moved frequently to clean ground and fresh pasture.

**Production Testing:**—Measuring the ability of a sow to milk heavy and produce large litters of rapid-growing pigs will be a post-war demand. There is as wide variation in the milking capacity of sows as there is of cows. Milk from certain sows and sow families evidently aids pigs to do better and grow more rapidly than does milk from other sows. Some sires and dams can and do transmit to their offspring the ability to grow big quickly.

## LIVESTOCK PRODUCTION FROM THE SLAUGHTERER'S VIEWPOINT

Analysis of this problem can best be made by consideration of each of three major phases and then coordinating them into a balanced program.

The three phases of the problem are:

1. Demand for meat and other livestock products, with special reference to the volume and nature of the demand, rather than expected price levels.
2. Livestock production capacity of Maryland farms, including both volume and kind of livestock production.
3. Processing capacity.

1. **Volume of Demand**—The U. S. Department of Agriculture reports for 1942 an average per capita consumption of all meats (dressed carcass weight basis) of 146.5 lbs. This is made up of 65.8 lbs. of beef, 8.2 lbs of veal, 7.2 lbs. of lamb, and 65.3 lbs. of pork (exclusive of lard). If, as a minimum population figure, one million is used as representative of the Baltimore trade area and as a maximum figure 2,500,000, which represents the total population of the State of Maryland and the Washington, D. C., trade area, there are obtained the figures shown in Table I as a maximum and minimum tonnage and number of head of livestock required to meet this demand.

It is obvious that volume of demand measured by this method exceeds substantially both the past production and estimated wartime capacity. Figures from the census and from a study made by the University of Maryland are shown also in Table I.

TABLE I

| | Beef | Veal | Lamb | Pork Excl. Lard |
|---|---|---|---|---|
| Annual Per Capita Consumption (lbs.) | 65.8 | 8.2 | 7.2 | |
| Carcass Wt. of meat required (lbs.) | | | | |
| Minimum Population, 1,000,000 | 65,800,000 | 8,200,000 | 7,200,000 | 65,300,000 |
| Maximum Population, 2,500,000 | 164,500,000 | 20,500,000 | 18,000,000 | 163,250,000 |
| Average Carcass Wt. (lbs.) | 500 | 70 | 35 | 120 |
| Equivalent No. of Head Required Per Year: | Cattle | Calves | Lambs | Hogs |
| Minimum | 131,600 | 117,143 | 205,714 | 544,166 |
| Maximum | 329,000 | 292,857 | 514,285 | 1,360,416 |
| Salable Receipts, 1943, Baltimore Union Stock Yards: | 104,277 | 40,575 | 72,039 | 245,614 |
| Md. Farm Livestock Population: | Total | Cattle and Calves Excl. Milk Cows | Sheep & Lambs | Hogs |
| January 1, 1944 | 366,000 | 150,000 | 52,000 | 289,000 |
| January 1, 1943 | 355,000 | 143,000 | 56,000 | 247,000 |
| January 1, (10-yr. Average 1933–42) | 317,000 | 123,000 | 78,000 | 202,000 |
| Maryland Pig Crop—1943 | ..... | ..... | ..... | 485,000 |
| —1942 | ..... | ..... | ..... | 384,000 |
| Wartime Capacity: | Total Cattle & Calves | Beef Cows 2 yrs. & over | | |
| | 344,000 | 12,000 | 57,000 | 485,000 |
| Feasible Capacity: | | | | |
| —1944 | 344,000 | 11,000 | 57,000 | 485,000 |
| —1945 | 350,000 | 12,000 | 57,000 | ..... |

It appears that there is little danger of Maryland livestock production exceeding the volume of demand in local markets. This is further emphasized by the proximity of other large population centers which also furnish substantial outlets for Maryland livestock production. Therefore, major emphasis seems to fall on the nature of livestock production, for in spite of a total demand exceeding the total volume of production it is possible to have the type of products out of line with the type of products required. This could result in gluts and consequently unsatisfactory price levels in the face of substantial over-all demand.

Prior to the war there was a definite trend in consumer demand toward lighter weight, well finished (but not wasty finished) yearling type beef. There is no basis for expecting any change in that trend in the post-war period. To meet this demand will require increasing numbers of well-bred yearling cattle fed sufficient grain to grade top, good and choice.

Beef cattle in this area, to adequately fill an economic place, must consume large quantities of grass and coarse roughages. To do this and at the same time produce the quality of beef required with a minimum of grain will require a post-war system of beef production somewhat different from that prevailing in the past. Livestock markets in this area always have received too high a proportion of the low grades of cattle, especially in the fall months, to be merchandized at prices satisfactory to either the producer or processor. Also, Maryland slaughterers have been handicapped in the development of a reliable and uniform outlet for beef due to a combination of a glut of plainer grades of cattle which must be merchandized and acute scarcity of the good and better grades of fed cattle.

It, therefore, seems a major objective of post-war beef cattle production should be an evening out of the receipts of the various classes and grades of cattle, together with an improvement in the average quality resulting from feeding better bred and lighter weight cattle.

It is difficult to formulate a definite production program for veal, as it is a by-product of the dairy industry. Although a substantial supply is produced in this area, it is below total veal requirements, so that slaughterers must supplement the local supply with production from other areas. Maryland slaughterers have no illusions regarding the average quality of veal calves produced in this area, as it is realized that a strictly fluid milk production area does not produce as high quality vealers as a dairy manufacturing area or less specialized dairy area. Problems with respect to veal are concerned principally with marketing. Too great dispersion is probably not to the best interest of either producers or slaughterers, as there is a tendency for better grades to be sold without effective competition while less desirable grades eventually find their way to certain few markets in larger proportions than can be merchandized at fair prices.

There is a marked shortage of supply of sheep and lambs in relation to demand. However, the pattern changes from glut to acute scarcity during the various seasons of the year. This results from the nature of sheep and lamb production in this area and the almost total absence of commercial lamb feeding. Maryland produces entirely too many coarse, raw-boned, thin lambs in proportion to i ts total volume of production. The majority of these lambs are marketed in a relatively short season in late summer and early fall. This production, coupled with the run of lambs from Virginia and West Virginia and with practically no feeder demand to remove the thin ones, results in entirely too high a proportion of off-grade lambs being forced into slaughter channels. This not only adversely affects the consumer demand for lamb, but places the lamb market under undue price pressure. The solution to this problem involves: First, an improvement in the sheep "mentality" of producers; second, a change of type to a meatier, more compact sheep which will produce lambs that fatten readily on grass; and, third, development of commercial lamb feeding to absorb the thin end, which is unsatisfactory for slaughter, and return it to market as fed lambs.

In hog and pork production there is a substantial surplus of demand over production, but there is little question that the gap could be narrowed by increased production resulting from more efficient methods. The pig-sty method is not conducive either to volume or profitable production. There are many misconceptions of correct hog type and desirable market weights which must be corrected. Variations in the price relationships of hogs of different weights, contrary to general opinion, are not caused by variations in consmuer demand. They are the result of variations in the supply of different weights resulting from producer decisions on production. These decisions are made primarily because of variations in supply or price of feed, of labor, and other items in the cost of producing hogs. Maryland swine production should be aimed, year in and year out, at production of finished, grain-fed hogs weighing in the range of 180 to 230 pounds. The rangy type and the chuffy type both are objectionable. Maryland swine producers must pay more attention to a hog type designed solely to market a maximum quantity of feed. It is not reasonable to expect Maryland slaughterers to merchandise effectively as large a proportion of garbage-fed and distillery slop-fed hogs as they have been forced to absorb in the past. Other means of utilizing these feeding materials must be found, or means of combining them in rations so that they will not adversely effect the quality of the pork produced.

2. **Production Capacity of Maryland Farms**—Estimates of the capacity of Maryland farms to produce various classes of slaughter livestock have been presented in a report of the University of Maryland. The relationship of estimated production to probable demand in this area is shown in the table in part one of this program. This relationship is significant to the post-war program, as it indicates that local production need not be limited in volume because of danger of exceeding the total demand for products in this area. Full attention can be given, therefore, to means of improving the quality and efficiency of production.

3. **Processing Capacity**—Existing facilities for meat slaughtering and processing and those contemplated as post-war developments are fully adequate to supply the meat requirements of Maryland. This slaughtering and processing capacity is greater than the livestock production capacity of the State. Facilities in areas tributary to Maryland add to the total slaughtering and processsing capacity available to absorb Maryland livestock production, so that there is no danger, either in the immediate or more distant post-war period, of livestock production in the State exceeding the capacity of slaughtering and meat processing facilities. The majority of existing slaughtering capacity in Maryland is owned and operated by Marylanders and Maryland capital. Under such conditions, the best interests of the livestock industry of the State will continue to be jealously guarded and developed.

The rare instances of incomplete clearance of livestock market supplies which have occurred in the past have not been due to lack of slaughtering and processing capacity. They were the result of merchandising problems occasioned by higher seasonal marketings of the lower grades of livestock (especially cattle and lambs) than the combined demands of consumers for lower grades of meat and of feeders for livestock suitable for further finishing could absorb. The answer lies in adjustment in the type of livestock produced along the lines suggested in this report.

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## POULTRY

In view of the need for more efficient production during the highly competitive post-war period and the great need for improvement in the average quality of poultry products, the following suggestions are made:

1. **Better Breeding**—Since the selection and breeding work with chicken and turkey flocks carried on under the Maryland Poultry Improvement Plan is basic in developing more profitable flocks, emphasis in the future should be given to the breeding of fast-growing, rapid-feathering strains of chickens and turkeys that will utilize feed as efficiently as possible in producing meat. Also, Record of Performance breeders operating under the Plan should employ progeny-testing as extensively as possible in order to be able to supply hatchery and other flocks with stock that will produce each dozen eggs on the fewest possible pounds of feed.

2. **Insulated Houses**—More widespread use of properly insulated houses, especially of the straw-loft type, should be greatly encouraged because a higher level of egg production can be obtained, both winter and summer.

3. **Artif cial Lighting**—More extensive use of artificial lighting should be made with: (1) pullet flocks to increase profits in fall and winter egg production; (2) yearling hens in the late summer to maintain fall production; (3) turkey breeding flocks in winter to stimulate early production of hatching eggs for use within the state and for markets in northern states.

4. **Disease Control**—Since diseases take such a heavy toll, every effort should be made through research and extension to develop better control methods, especially with respect to such diseases as coccidiosis, chick bronchitis, cholera, leucosis, pullorum, laryngo-tracheitis, and fowl typhoid. Poultry producers feel that a bulletin on controlling poultry diseases by the Livestock Sanitary Service would fill a great need.

5. **Maryland Fresh Egg Law**—More educational work is necessary among producers, to encourage them to produce eggs that wi.l qualify under the provisions of the law, and among merchants to encourage them to emphasize the importance of quality to consumers. It is suggested that an information center be established to advise producers of profitable outlets for high quality eggs and to advise merchants where they can secure quality eggs.

6. **Farm Egg Coolers**—More extensive use of farm egg coolers would greatly improve the average quality of Maryland eggs and increase hatchability of hatching eggs.

7. **Egg Sizing Law**—The Maryland State Poultry Council requests passage by the General Assembly of an egg sizing law with a view toward improving egg marketing conditions in the state.

8. **Increased Grading of Poultry Products**—Selling market eggs and dressed chickens and turkeys on a graded basis should be developed extensively.

9. **Better Market Quotations**—The Maryland State Poultry Council urges development of a greatly improved egg and poultry market reporting service, especially in Baltimore and the leading county papers. Quotations should be made on the basis of grades.

10. **More Cooperative Marketing**—Since the Westminster Cooperative Poultry Products Auction has performed such invaluable service to poultrymen in the community through increased returns from their flocks, thorough studies should

be made to ascertain the possibility of establishing similar enterprises in other communities in the state.

11. **Cooperative Turkey Dressing Plants**—Studies should be undertaken to determine the feasibility of establishing cooperative turkey dressing plants in sections of the state where turkeys are grown in considerable numbers.

12. **New Outlets for Poultry Products**—Under war stimulus of the increased food production program, the production of eggs and chicken meat in the state has increased tremendously and unless current per capita consumption of eggs and chicken meat can be maintained, the production of these products will necessarily have to be curtailed. Studies should be made, therefore, to determine the possibility of developing new uses for eggs and new outlets for chicken meat.

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## VEGETABLES AND CANNING CROPS

**Improvements and Debts**—It is the consensus of opinion by sound economists that growers should use their present high incomes to retire outstanding debts. They also advise that costs during the war of new equipment and permanent improvements are high, and that the quality is decidedly inferior to pre-war times. Therefore, any improvements made at this time should be on a cash basis.

Much land used for vegetable production, both for market and for canning, is deficient in organic matter and in many cases it is doubtful if this acreage would produce profitable crops with low prices for produce. It is suggested that a portion of the present income be used to buy lime, fertilizer, and seed to grow and plow under cover crops. On some of the canning crop acreage, two cover crops can be grown in one season, if commercial fertilizer is used to both grow and break-down the cover crop. Non-leguminous cover crops may be substituted for legumes under this program in short rotations.

**Improved Grading, Packaging, Handling, and Merchandising**—Every grower has noticed that Western-grown produce nearly always brings a higher price on the Eastern markets than local produce. The main reason is the superior grading and uniformity of grading of the contents of the Western package. Therefore, if Maryland growers are to receive equal prices, they must necessarily grade and package their produce in a comparable manner. Lack of uniformity of grading by growers only causes confusion on the markets, drives away the high priced buyers,

and results in lower prices to the growers. Growers themselves should consider this problem and develop a program of their own, rather than have one thrust upon them.

Growers might also sponsor the building of more grower-owned and managed auction markets. Many improvements, however, are necessary in the management of these markets. In general, it takes too long for a grower to dispose of his load of produce and the great differences in prices during one day stress the need for better grading and merchandising.

Better quality should be emphasized in any post-war development of improved merchandising. The consumer will demand and should receive the best quality product and at as nearly the optimum stage of maturity as the product can be harvested. This may necessitate the use of pre-cooling and refrigerator transportation. It may also include trimming, snipping of beans, shelling of lima beans and peas and other methods to prepare the produce ready to be cooked. This would entail development of the consumer package containing quality which would compete with the frozen package of food. There are great possibilities in this field, but probably a good deal of research will be required before the consumer will be able to obtain such a product. If this development occurs, consumers must be educated to the value of such produce.

An educational program should be initiated to get the proper information to not only consumers, but also merchants and handlers of foods on what quality is, reasons for its loss due to improper handling, and on the proper methods of preserving quality. This would include the latest information on handling, storing, and displaying vegetable crops.

**Development of New Varieties and Types of Vegetables for Special Purposes**—The newer varieties of vegetables should be tested for their special suitability for either consumer package use, for quick freezing, or for dehydration. The post-war development of locker plants in this area and the anticipated greater use of home freezing units makes this information of greater importance to the producer of fresh produce. Greater use of locker plants will stimulate the sale of locally-grown vegetables and growers should have the information on best varieties and types for freezing and preservation. Larger growers, or groups of growers, might install equipment for the partial preparation of vegetables to be sold in quantity to locker plants for their patrons.

**Increased Efficiency of Production**—All government controls on prices, production, or any other control that interferes with the individual initiative should be removed as soon as it is practical to do so.

**Short Courses**—Short courses for returning veterans and other young men interested in farming should be given in a very practical way to train them for work in the specialized field of vegetable production and processing.

**Irrigation**—The importance of water at the proper time is evident to all growers and the creation of new metal alloys during the war may make possible greater use of supplementary irrigation in the production of high quality vegetable crops. More experimental data are needed in Maryland on this subject, but growers might seriously consider this whole subject in the post-war period.

**Advertising Program**—Should the State of Maryland initiate an advertising program for its own products, as has been done in Maine and Idaho? This would probably necessitate legislative action, but it is worthy of consideration.

**Surplus War Equipment**—If the disposal of surplus war equipment is handled properly, and if the prices are reasonable, there are many types of equipment that could be used for heavy farm work, such as land clearing and leveling, digging of drainage ditches, and other uses. Growers have an investment in this equipment and they should see that it does not fall into the hands of unscrupulous dealers.

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## FRUIT CROPS

Practically every suggestion made herein is based upon a rather long-time system of planning and education. After the war, the country and the whole world will face unsettled conditions never known in our history and it will be difficult for a time to know the needs for agricultural products, both in America and in foreign countries.

Waste and duplication must be abolished and confidence in democratic government restored. As soon as safely possible, the wartime restraints and controls of industry and agriculture should be removed.

**Culturally,** we should aim to:

1. Reduce waste during production by better control of insect pests and diseases, through more efficient spraying and cultural methods. This involves more research; more efficient use of methods, materials and equipment we now have; increased education of workers to reduce damage and bruising of farm products; increased production per unit (tree or acre) to reduce waste of manpower and machinery.
2. Study carefully the best methods of soil management and maintenance of soil fertility.
3. Replace with more approved varieties the many obsolete varieties not in market demand.
4. Remove undesirable trees. It would be of great benefit if some type of legislation were possible whereby abandoned acreages within certain distances of commercial blocks or areas would have to be removed by the property owner to avoid build-up of disease and insect pests.
5. Establish a rotation system of replanting that will allow for removal of blocks after a certain number of years without seriously decreasing production.
6. Space trees in new plantings so that more efficient operations are possible and trees are allowed maximum chances for high production. Fewer trees and higher production per acre are desirable.
7. A close study may show that greatly increased acreage of fruits is not advisable until a clearer picture of post-war foreign trade demands and increased domestic consumption are known.

**Crop Estimates,** if accurate, are of great benefit to growers and the trades. Growers must be impressed with the importance of full cooperation with the State and Federal Crop Reporting Service in making complete and accurate crop reports when requested.

**Closer Cooperation Between Growers** of fruits, whether of the same kinds or allied and competitive fruits, is becoming more essential. Formation of a National Advisory Fruit Council, representing all types of fruit growers, is highly recommended and action has been started toward that objective. Such a Council could speak for the industry in the inevitable changes and developments that are certain to occur when foreign trade is being considered.

**Marketing the Crop** is an operation upon which will depend all profits to the grower or benefits to the consumer. Plans in marketing should include:

1. Building good will or better public relations between the grower, the dealer, and the consumer. Publicity will be of help in this matter.

2. Growers must pack a better product. New packages probably will develop and new merchandising methods will be adopted, but the grower will still have the obligation to grade more fairly and pack more carefully and attractively.

3. Marketing operations are too complicated. Produce goes through many hands with resultant loss and waste, and possibly added costs to the consumer. The producer must strive to get more of the consumer dollar, or at least to keep the consumer price low enough to attract the purchase of his products.

4. Vigorous action by producers of fruits and vegetables must be taken to assure and speed construction of adequate marketing facilities in Baltimore. Too much lost time, waste, and confusion now exist in Baltimore markets.

5. Fruit growers of Maryland should plan to take vigorous and active part in future resumption of foreign trade.

6. Fruit growers of Maryland should become acquainted with the newer developments in preparation of fresh fruits for market in frozen form. Also, they should keep abreast of developments of new by-products, such as dried fruits, canned fruits, pastes, juice, powder, syrup, etc., as a further outlet for fruit not suited for fresh market consumption. In the times ahead, possibly no grower can afford to lose profits on too much of his lower-grade fruit, and a hungry world cannot afford to waste food.

7. As mentioned elsewhere in this Plan, growers must enter into the field of advertising or publicizing their products, as this is one of the greatest aids in creating consumer preference and demand.

**Research** should be stressed along such lines as:

1. Consumption of fruits and consumer preferences in order to guide growers in future plantings as regards varieties, best uses of varieties, etc.

2. Packaging of fruits, including type of package, costs of packing, adaptations of packages to regular market handling, storage, freezing, etc.

3. Continued breeding and selection of better adapted fruit varieties.

**Administration or Business Management of Orchards or Fruit Plantings**

1. Expand cautiously. According to statistics, our apple crop is suffering from over-production, but possibly there is under-consumption. The peach crop seems to be due for a heavy and possibly over-production period. Changed food habits and proper publicity may correct these possibilities. The small fruits are not up to market demands. Heavier production with smaller profit may prove more practical than short crops with big profits.

Land prices are in the inflation stage. There has been an increase of 36 percent in prices of farm land and the increase continues at the rate of 1½ percent a month. Many growers are still handicapped by high-priced land purchased after the last war.

2. Borrow on credit only when necessary, and then only for short-term loans.

3. Improve land, buildings, and equipment in preparation for possible depressed conditions that may arise later. Purchase of equipment may not be advisable during the war period when quality and prices are not favorable, but present profits should be deposited, or invested in War Bonds or other safe investment, until conditions for such purchases are more nearly normal.

4. Investigate present and future supplies of used army equipment; purchase cautiously and, above all, do not over-stock with useless equipment.

5. Enter vigorously into promotion of existing grower agencies for publicity and sales promotion of fruits, working toward a national plan for fruit publicity and better public relations with consumers.

6. Take renewed interest in existing organizations, such as State Horticultural Societies, State Experiment Stations and Extension Services, National Apple Institute, etc., as a means of promoting education, research, better cooperation between growers, both large and small, and continued advancement of grower interests on a national scale.

**Labor Supply**—To obtain maximum efficiency from orchard or farm laborers, growers should plan to select good men, train them, and assure them the security of a long-time job; good living quarters, where necessary; attractive or reasonable wages; reasonable hours of work; a bonus or a share of profits, where necessary to keep good men in the face of other labor competition.

Among the millions of war veterans who will return there are bound to be men of ability who can do a good day's work and also assist the grower in management of many details connected with production of fruit, relieving him of some of the responsibility. The present shortage and confusion of farm labor should impress the grower with the great importance of having a steady and settled force of farm or orchard laborers, and the peace of mind that comes from having a dependable, capable and loyal group of men interested in the grower's business.

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## INSECT AND DISEASE CONTROL

Agriculture suffers an annual loss of approximately 10 percent from ravages of insects and diseases. Since many of these are minute or hidden, they frequently escape attention until damage is irreparable. Therefore, it will be necessary for those charged with control work to conduct educational campaigns continuously and energetically with regard to insects and diseases and their control. This work functions through the County Agricultural Agents, who should be the fountainhead for dissemination of information to their constituents. However, at present, the County Agent is so overburdened with extra duties that several observers

located in each county will be requisite to insure prompt knowledge of insect and disease conditions. In looking forward toward improvement in insect and disease control during the post-war period, this item should not be overlooked.

**Warden Service**—Exact information on the occurrence of the principal pests of major crops is essential to proper timing of control measures. This information can be obtained by a warden or observer system. The method has been tried and found practicable, but its use has been limited by manpower shortages. It is believed that with the return of soldiers an adequate warden service can be created that will greatly improve our pest control.

**Japanese Beetle**—Remarkable progress has been made in an attempt to establish a balance of nature such as exists in the native home of the Japanese beetle. A large number of parasites have been imported into this country and of these, two species have proved adaptable to Maryland conditions. Approximately 700 colonies of 100 fertilized females have been released in the State. A bacterial disease that is extremely efficient, able to persist in the soil for long periods without loss of vitality and readily manufactured when sufficient Japanese beetle grubs can be secured, is being used as another item in the biological control. This material has been manufactured at the University and has been distributed in all of the heavily infested areas. The original plan of 3 one-acre plots in each square mile has been expanded to the coverage of every farm in the area where infestation is heaviest. Along with biological control, there is a continuation of trapping to relieve acute situations and to determine the best distribution of the milky disease; protection of ripening fruit and shrubbery from injury; the timing of planting certain crops, together with selection of resistant varieties, and other activities in the Japanese beetle control program, all of which are aimed as supplements in the re-establishment of equilibrium in nature with respect to this pest.

This program should be continued in the post-war period, with specific emphasis on thorough establishment of a biological complex which will ultimately reduce the Japanses beetle to the status of a native pest. Labor, now not available for expansion, should be available in the post-war period and much greater progress should be made.

**Mosquito Control**—Emphasis has been placed upon malaria mosquito control during the war. In the post-war period, this will be continued and should be expanded to include pest mosquito control. The National Malaria Society proposes the elimination of endemic malaria, which will account for utilization of at least 100 men in Maryland. Pest mosquito control on a county-wide basis will need approximately the same set-up that was required for two CCC camps, i.e., about 300 men, one or two camp sites, barracks, mess hall, water supply and sewage disposal, and complete equipment for anti-mosquito work.

**Fly Control**—The new insecticide, DDT, offers such promise for house and stable fly control that it is possible to envision an area clean-up of flies by its use. Such a campaign would entail selection of a limited area, such as a county, or selection of an industry, such as the dairy industry in a particular county and ultimately throughout the State, with an organization developed for efficient spraying of large established dairies on a service basis. DDT is remarkable in that there is a residual effect that lasts as long as six months. Flies alighting on the surface that has been sprayed, even after three months, will succumb to the effects

of the material. Fly control, therefore, seems to be well within the realm of possibilities in dairies, possibly certain types of farms, and certainly in houses, restaurants and stores.

**Biological Control**—Such marked success has been achieved in control of Japanese beetle by biological methods that an effort has been instituted to develop a biological complex for control of the European corn borer. To this end, parasites of four different species have been liberated in the State during 1944. Expansion of this project is eminently worth while and other specific projects should receive attention. Rearing and colonization of these predators require specific temperature and humidity control, if efficiency is to be achieved. Suitable space, properly equipped for temperature and moisture control should be developed as an integral part of the fight against insects and diseases.

**Potato Wart Eradication**-The area known to be infected in Maryland is confined to portions of Allegany county. Scouting may show some additional gardens, but all known infections are in small plots, mostly miners' backyard gardens. Eradication can be effected by the copper sulphate treatment. Subsequent to the war, treatment crews of about 10 men equipped with power sprayers can treat all the areas known to be infected in one season. Testing for eradication will require planting non-immune plots in each garden, their cultivation, harvesting and evaluation.

**Dutch Elm Disease**—Congress has debarred its agencies from eradication of diseased trees on private property. Hence, it becomes necessary that the State provide funds to remove and burn trees found by the Federal scouts to be infected. This is a continuing fight that will entail annual expenditures that must be provided by legislative action.

**White Pine Blister Rust**—Federal and State agencies have been working for many years in an effort to eradicate wild Ribes from the forests where white pine is important. This applies particularly to the forests of Allegany and Garrett counties. Under present appropriation bills, the Federal agencies are allowed to participate in control programs only when approximately one-half of the total funds to be expended are contributed by the State. The importance of white pine and the large sums already spent by Federal agencies on eradication of Ribes warrant the continuation of the program.

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